BRITISH ARMOUR in ACTION

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ARMOR NUMBER 9

British ARMOUR in Action

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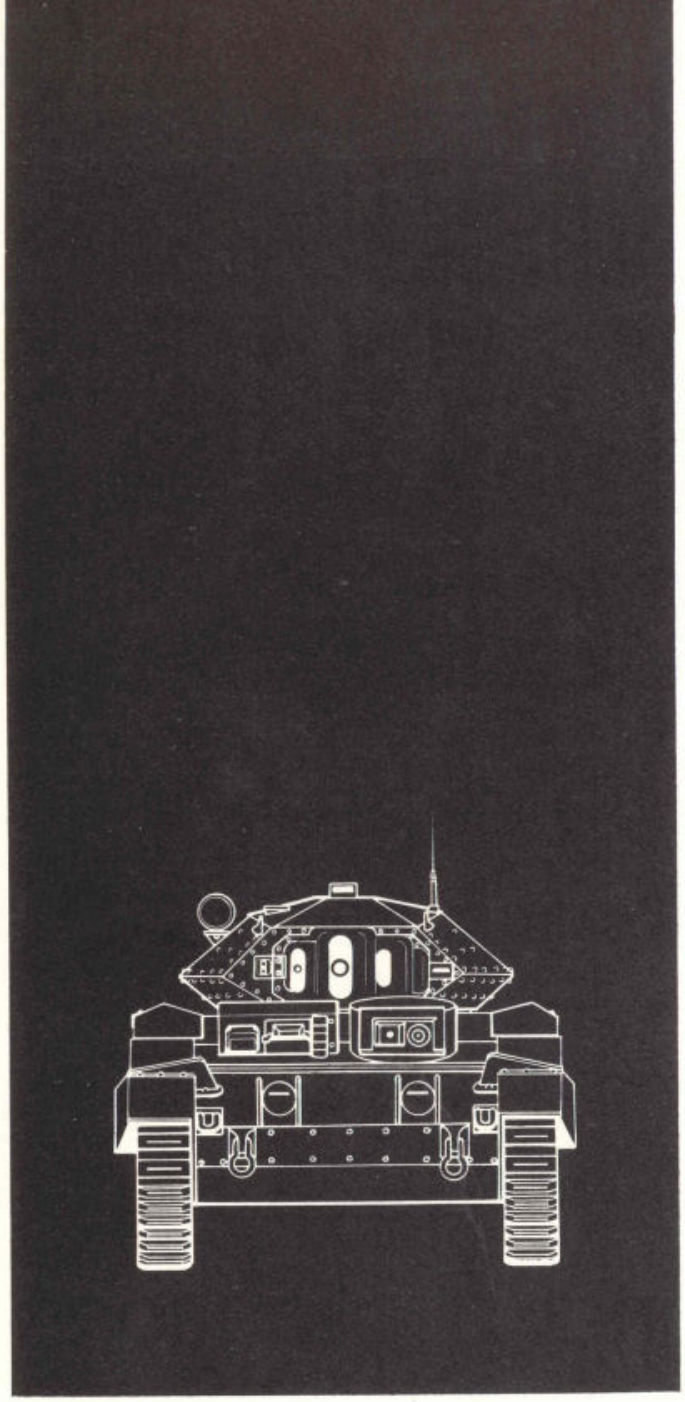

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Forward

In our present volume dealing with **"British Armour In Action"** we shall begin our discussion with the Battle of France and proceed to North Africa. The coverage of vehicles has been limited to those which appear in service by the time of the Battle of El Alamein. These limits cover almost one half of the Second World War period and were the most formative for the British tank forces who would later enter battle on the European continent.

The lessons learned in France and North Africa were done so from practical experience in contrast to book principles, though book principles had been tried in the beginning. One book which might have been of some assistance was the one being written in Poland and France by the German Panzer divisions. The engagements between British and Italian forces in North Africa could not be considered a sound basis to prepare future plans in handling armored formations. The down to business aspects of North Africa commenced with the arrival of the Desert Fox, Rommel.

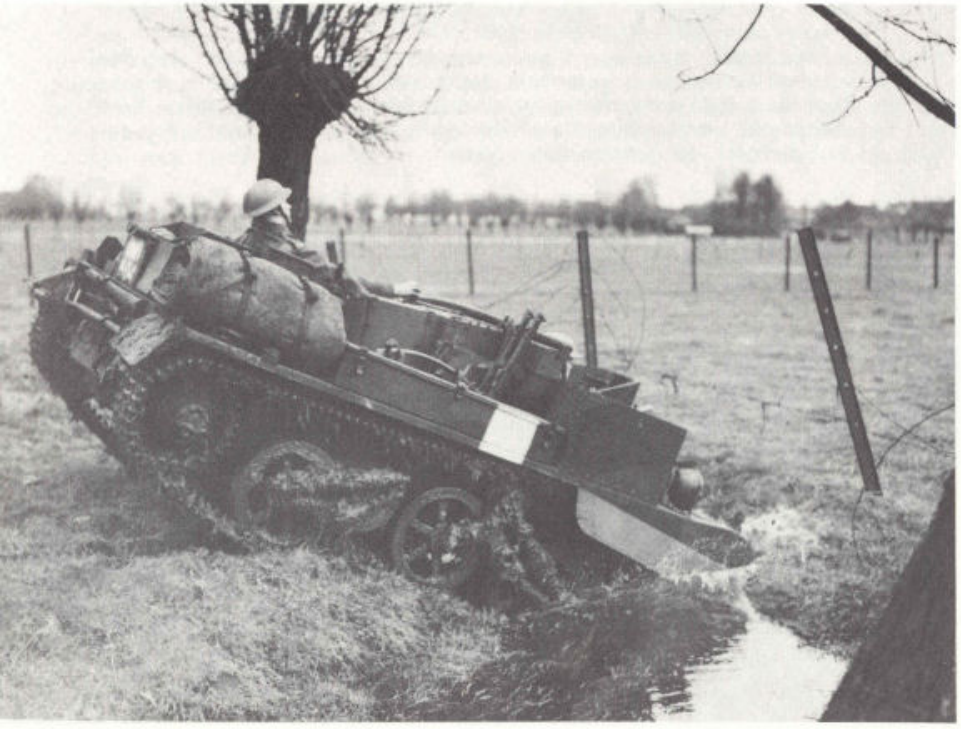
4/7 Royal Dragoon Guards

The period of time between the fall of Poland and the opening of the Battle of France has been termed the "Phony War." Military operations consisted of mostly propaganda activities intended to influence the other side. The British command conducted a series of military exercises to demonstrate the strength of the British Expeditionary Force stationed in France. Here, in late 1939, the 4/7 Royal Dragoon Guards participate in one such program, to sharpen their combat skills and possibly sway the Germans into thinking an attack on France would be ill advised.

Development of the carrier vehicle derived from the concept of providing armored mobility for the infantry formations. As employed, the chief function of the Scout Carrier was that of reconnaissance. Forty-four scout carriers were assigned to each regiment of the Mechanized Divisional Cavalry regiments of the B.E.F.

(Below right) The maneuverability offered by the Scout Carrier allowed the British field commanders to adopt a flexible posture compared to the rigid defense measures of the French during the opening days of the Battle of France. The sloped left rear decking is a distinguishing feature between the early carriers and the later Universal Carrier which features an upright appearing superstructure.

The Scout Carrier, an example shown here, forerunner of the Universal Carrier, together with the Light Tanks IV, V and VI formed the bulk of the B.E.F.'s armored units.

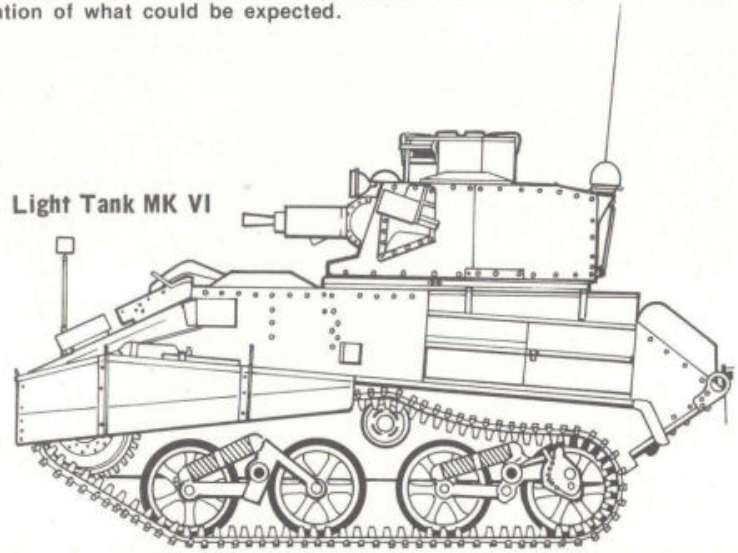


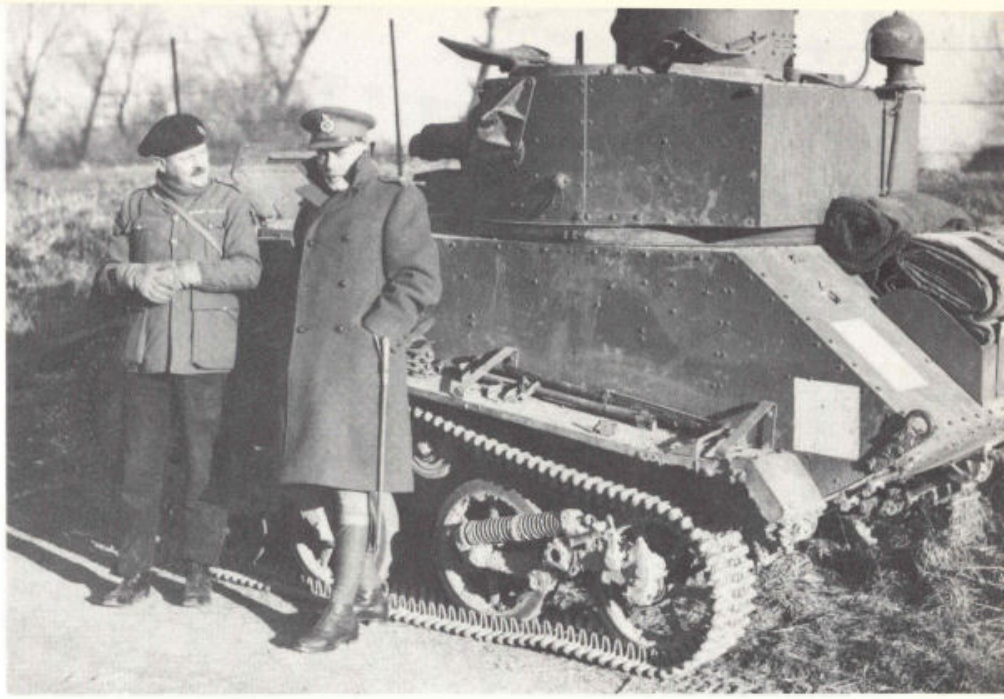
Consulting road maps prior to the order to move out, members of the 4/7 Royal Dragoon Guards regiment, are typical of armored regiments found in France with the B.E.F. Other regiments of the Mechanized Divisional Cavalry included the 5th Dragoon Guards (The Skins), 13th/18th Hussars, 15th/19th Hussars, 1st Lothians and Border Horse, 1st Fife and Forfar Yeomanry and the East Riding Yeomanry.

(Below left) Both the Scout Carrier and Mk VI B light tank had three man crews. Their road speeds, 30 MPH and 35 MPH respectively, were far in excess of speeds which could be achieved by either German or French tanks of the period. Such speed made them ideal vehicles for reconnaissance purposes.

Apart from the scout carriers assigned to each Mechanized Divisional Cavalry regiment, each regiment also included 28 light tanks within its organizational make-up. Component units of the B.E.F. included armored as well as infantry formations. Armored units sent to France with the B.E.F. were the 1st Armored Division, 4th and 7th Royal Tank Regiments, seven regiments of Mechanized Divisional Cavalry and the 12th Lancers, an armored car regiment.

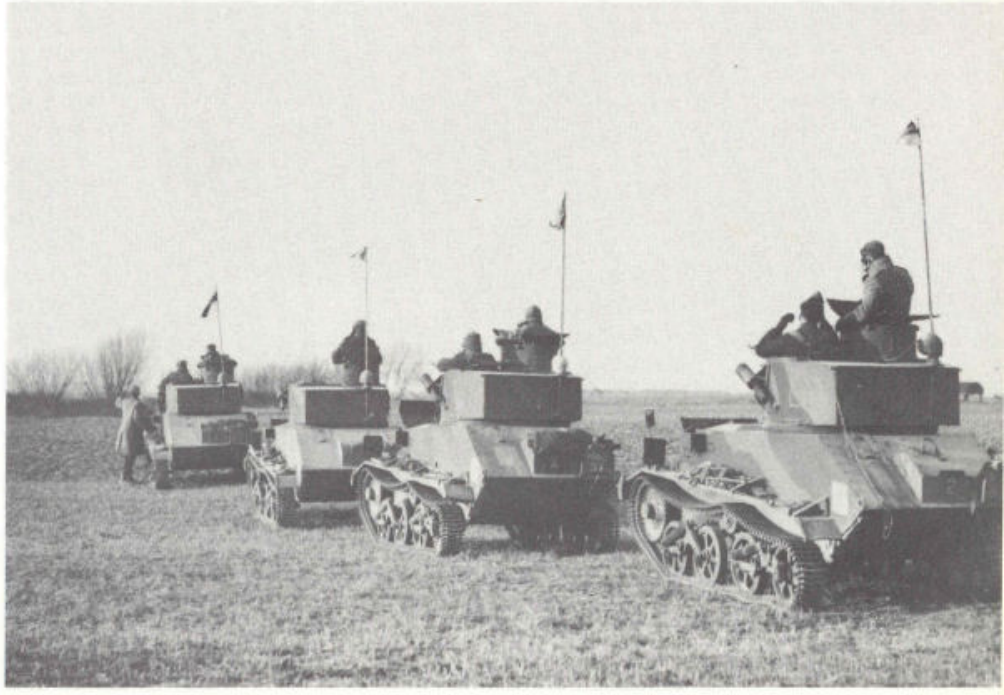
Efforts by British field commanders to rapidly respond to the new battlefield conditions imposed on them by the German Blitzkrieg in France and the Low Lands were often thwarted by archaic thinking within higher levels of command. German demonstrations of their armored capabilities in Poland should have been a clear indication of what could be expected.





(Below right) The British tanks carried various types of identification markings. A diamond signified vehicles of HQ Squadron, a triangle represented "A" Squadron, a box, (as viewed on the tank at the bottom right) for "B" Squadron, a circle for "C" Squadron, (second MK VI B from right) and a rectangle for "D" Squadron. This system was further expanded by using color coding to indicate the various regiments.

The basic dark green/earth colors applied to British vehicles blended with the French countryside. In this respect, British camouflage was perhaps more efficient than the gaudy camouflage schemes displayed by French armored vehicles and the monotone gray of German vehicles.



The generic term "Bren Carrier" has been loosely applied to denote British carriers in general. Specifically, the Bren Carrier was an improved model of the No. 2 Mark I carrier upon which the Bren medium machine gun was mounted, as viewed at the left of the photo.

(Left) Most variants of the light tank Mk VI were armed with a .303 and a .5 Vickers machine gun. The concept of a fully tracked machine gun tank was utilized by almost all tank producing nations during the 1930's. The cylindrical objects mounted on the turret sides are smoke bomb launchers.

Although blessed with its remarkable speed, the Mk VI tank could not be considered a battleworthy vehicle, lacking in firepower and armor protection. Their retention in service, well into 1941 seeing action in Greece and North Africa, had been the result of the tremendous loss of equipment during the Battle of France and the Evacuation from the beaches of Dunkirk.

Despite its lack of mechanical and technical sophistication, the Mark VI formed the bulk of armored vehicles assigned to British forces in North Africa.

Here, the 8th Hussars are seen assembling at Abbassia Barracks, Egypt, in September 1939. Their equipment at this time consisted of 11 Mark III's and 7 Mark VI B's, 11% of this total represented by the two VI B's shown in the photograph.

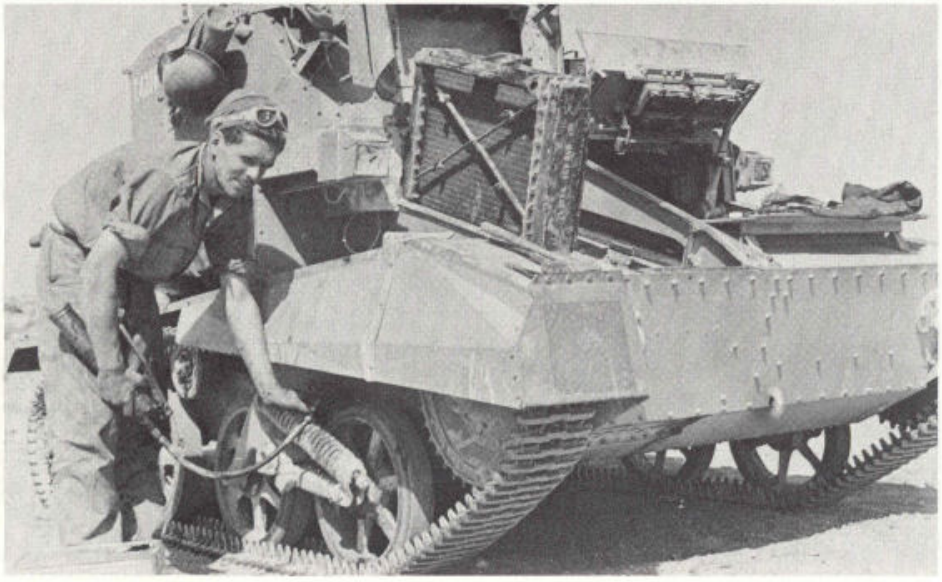
Light tanks of the 7th Armored Division were among the first to strike a blow against Italy after the outbreak of hostilities on 11 June 1940. Note should be made of the two variations of the 7th's divisional insignia carried on these vehicles' left front fenders; the first and fourth vehicles carry the partial insignia consisting of a white circle within a red square, while the second and third vehicles feature the complete insignia with a red jerboa, "Desert Rat," within in the white circle.

Two Mark VI tanks of the 7th Armored Division, better known as the "Desert Rats," named after their insignia, demonstrate the truth behind the saying that "Dust means Death." The cloud of dust thrown up by vehicles in the desert allowed enemy observers to detect the presence of opposing forces long before they would normally be detected thereby allowing a reception to be prepared.

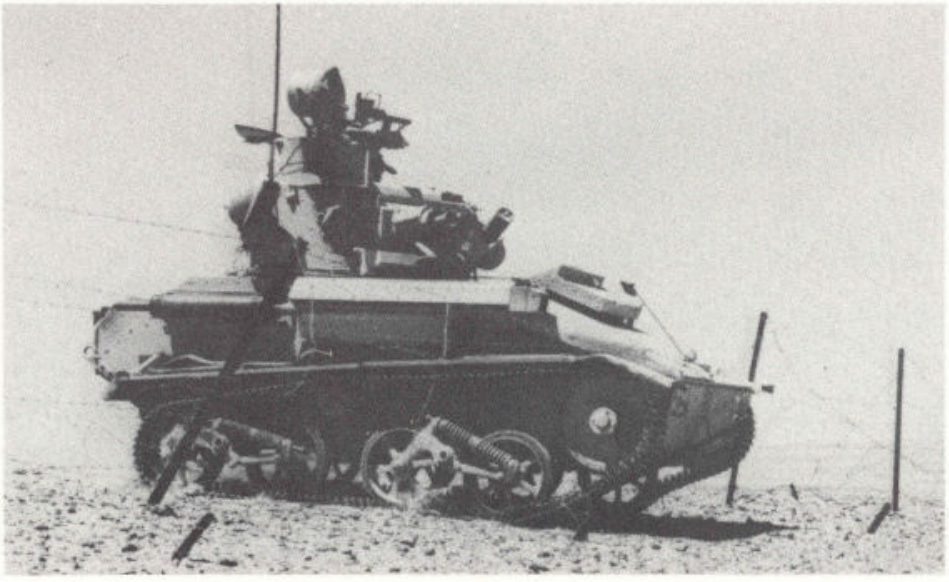
One of the most serious problems in North Africa was the danger of over extended lines of supply and communication. In order to properly cover their alloted territory, each regiment fragmented itself into many small units. Control of these groups involved the use of many different forms of communications, here an ANZAC lieutenant on a motorcycle gives directions to vehicles from an Australian Mechanized Cavalry Regiment. The white mark in the lieutenant's cap is the result of a wartime censor's pen preventing his unit's cap from being identified.

Performing their main function, reconnaissance, the crew of this Mark VI tank sweeps the horizon for signs of enemy movement. The vehicle has been camouflaged to blend into the desert background using light blue segmented portions over the basic "sand tan" color.

The vast open regions of North Africa coupled with heat and dust demanded that the British tankers perform constant and exhaustive maintenance on their vehicles. Here a driver is applying a lubricant to a wheel assembly. Mechanical failure could spell the loss of equipment and crew as well.



Barbed wire was used extensively in the desert although somewhat differently employed than that found in other theaters of operations. Forts and other field works often had massive amounts of wire protecting them. Single strands, such as this, were not intended to stop tanks or troops but rather to mark boundaries between areas and were used many times as navigational aids in the desert much like lighthouses on the seacoast.

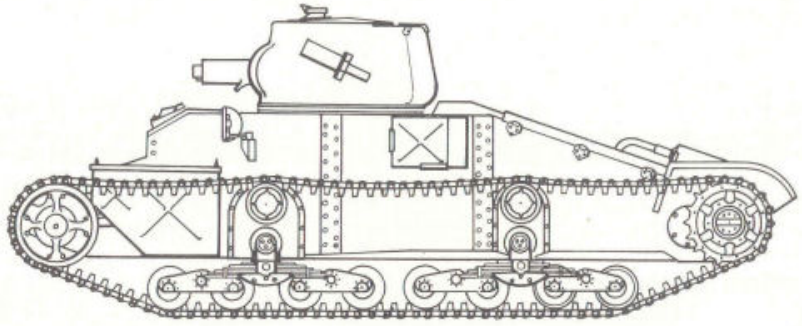


Mark VI B in "Malta Camouflage." A little known part of British tank history concerns the AFV's stationed on the island of Malta. Many of these vehicles were painted in the most distinctive and unusual dark green/sand pattern illustrated here. Only tanks found on Malta had this camouflage scheme applied which greatly resembles a rock wall found on the island.

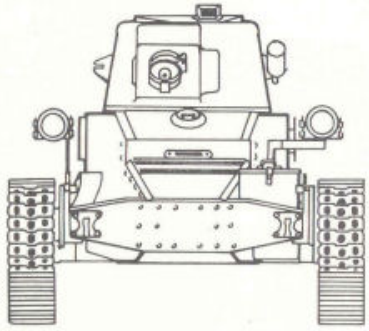
Duties assigned to the Malta tank force included airfield defense, armored recovery vehicles, mobile reserve and morale boosters. In these functions they excelled, adding greatly to the island's defenses. Emphasis on airfield defense had been punctuated during the battle for Crete. The attacking German airborne force had succeeded in taking the island but at great cost to themselves and only after securing an airfield through which reinforcements and supplies entered the battle.

The strategic importance of Malta was not lost on either the British or the Germans and their Italian ally. Plans had been drawn up for a joint German-Italian air and seaborne invasion of the island. To meet such an eventuality British forces, including the tankers, maintained their equipment and weapons in a state of high readiness. Failure to implement the German invasion plans for Malta kept the resolute island in British hands. Thereafter the island became the point of a dagger aimed at Rommel's jugular vein, his supply ships from the Italian mainland.

Matilda I **infantry tank and accompanying troops of an infantry rifle section. Designed from the onset as a strictly infantry support tank, the** Matilda I **had a top speed of but 8 MPH, powered by a 70 HP Ford V8 engine. The official designation for the Matilda I was** Infantry Tank, Mk. I, Matilda I (A 11).

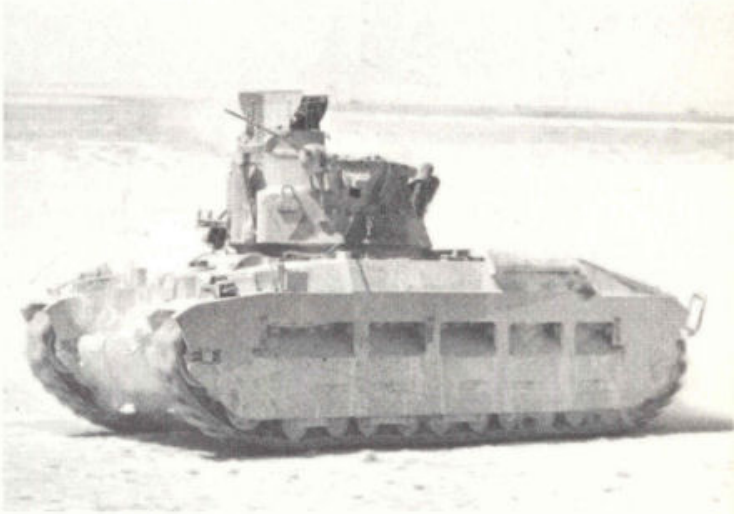


MATILDA I



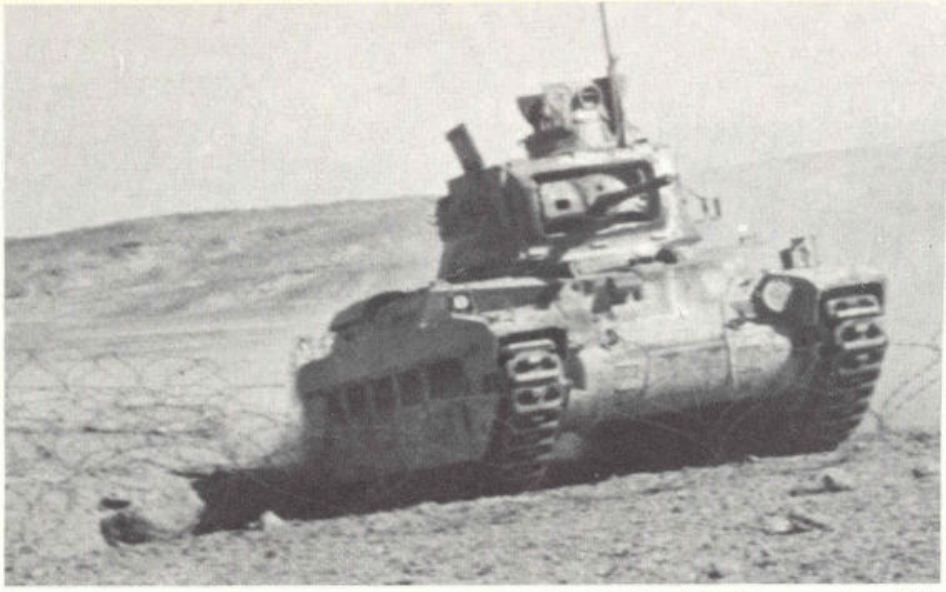
Crew for the Matilda I **comprised of two men, driver and commander/ gunner. Armament consisted of a single .303 Vickers machine gun. Armor protection ranged from 10mm to 60mm (.39 inch to 2.36 inch) and during the engagements between British and German forces in France, proved almost immune to the standard German 37mm anti-tank gun.**

MATILDA
INFANTRY TANK MARK II



During the formative years of modern tank tactics, the period between WW I and II, the future employment of tanks in battle led to a seemingly never ending debate among junior and senior officers in the world's military nations. One role would be infantry support. In England two specific types of infantry support tanks were to evolve, based on requirements outlined in April 1934, a small tank armed with a machine gun (Matilda I) and a heavier version to carry the 2 Pdr anti-tank gun (Matilda II, seen here with the turret traversed to the 4 o'clock position).

Infantry Tank, Mk II, Matilda II (A 12). **Owing to its outstanding war record during the early desert campaigns, the Matilda II is perhaps the best and most well known of all British AFV's of the Second World War.**



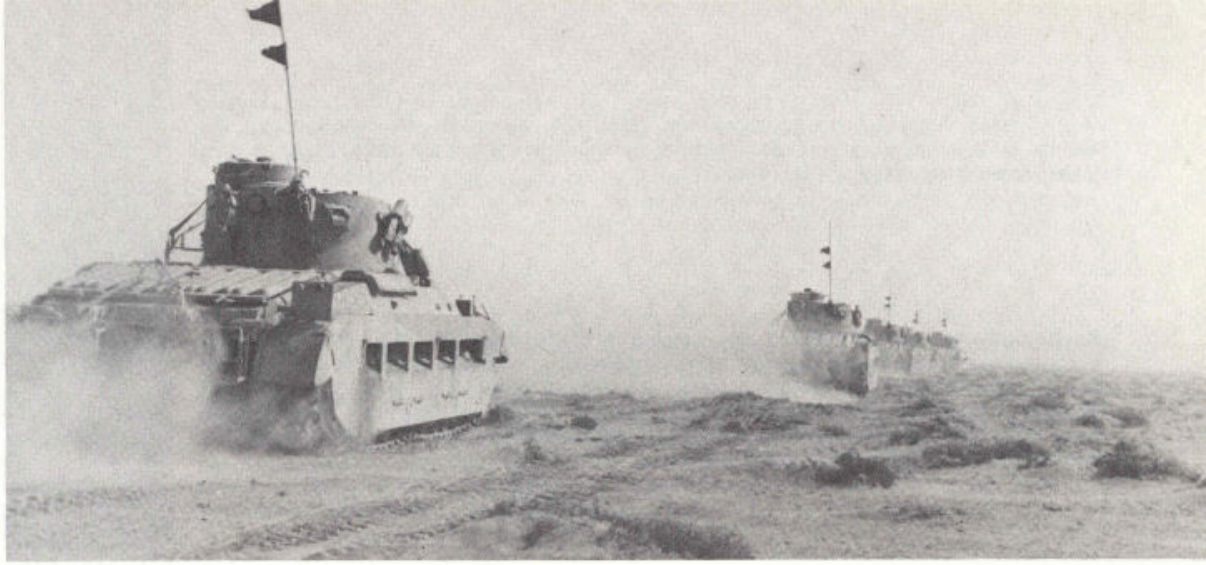
Although designed as an infantry support tank, the Matilda II had to operate within the new conditions of mobile warfare introduced in WW II. The idea of a strictly infantry support vehicle suggests the static warfare associated with the battles of WW II, whereby infantry would move forward under cover of and in company with a tank to reach the enemy's main line of resistance.

Mobile tank warfare very closely resembles the operation of opposing enemy naval fleets on the high seas.

As with naval maneuvers and tactical placement of individual vessels in a battle line, tank "fleet" commanders attempted to present the best possible formation when attacking enemy positions and other tanks. One such formation is the "V", illustrated here. The "V" allowed one half of the available firepower to bear to either side while the fullest would be achieved directly ahead.

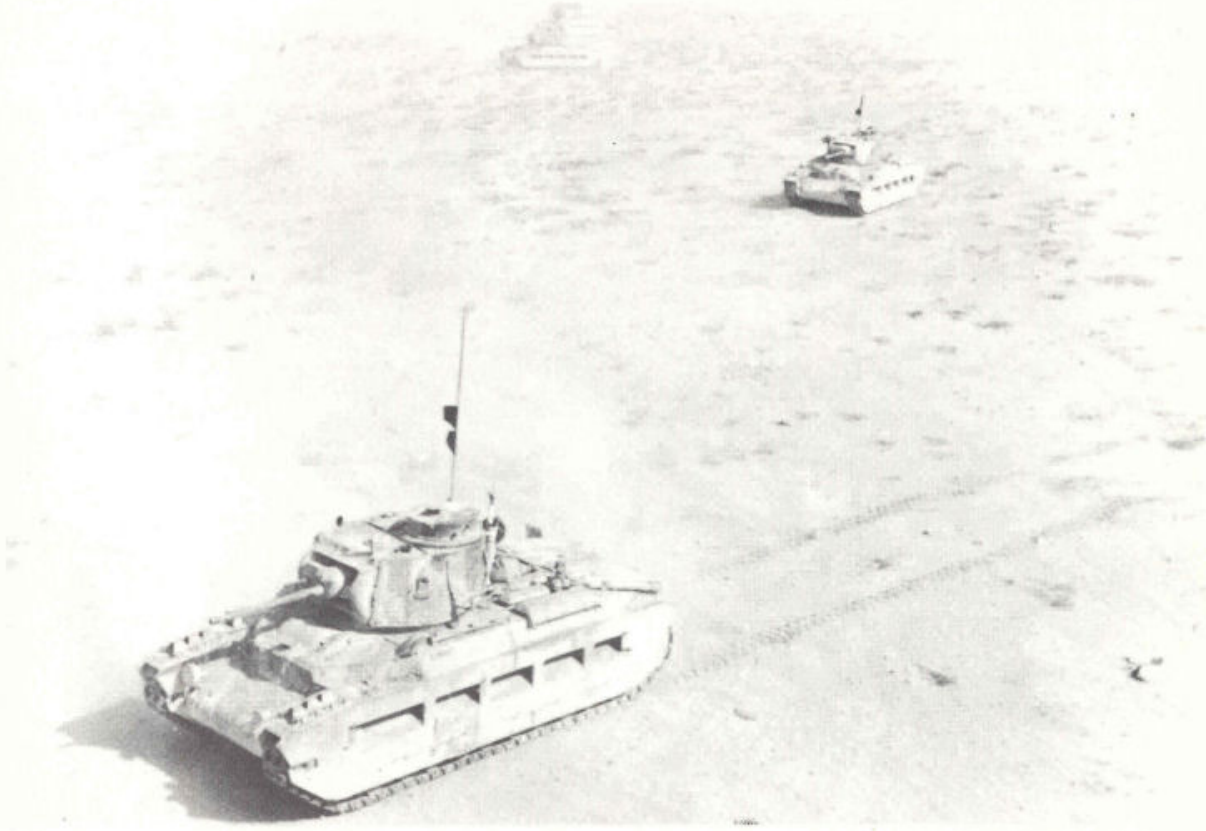
At the outbreak of hostilities in September 1939, only two Matilda II's were in service with British forces. By the time of the evacuation from France, June 1940, a number had been sent to France where they had given a good accounting of themselves. The most common background immediately brought to mind when thinking of the Matilda, however, is that of the Western Desert where they formed the backbone of British tank forces.

In naval parlance, the illustrated positions of these Matildas would be described as "line astern." Use of this placement would be more of a transportive mode and not used as an attacking formation. Vehicles side by side or "line abreast," provides the greatest amount of forward firepower but presents a little flank protection.



(Below right) The echelon formation allows good firepower coverage to either side and ahead but more important offers greater mobility in being able to turn right or left without interfering with other vehicles in the same formation.

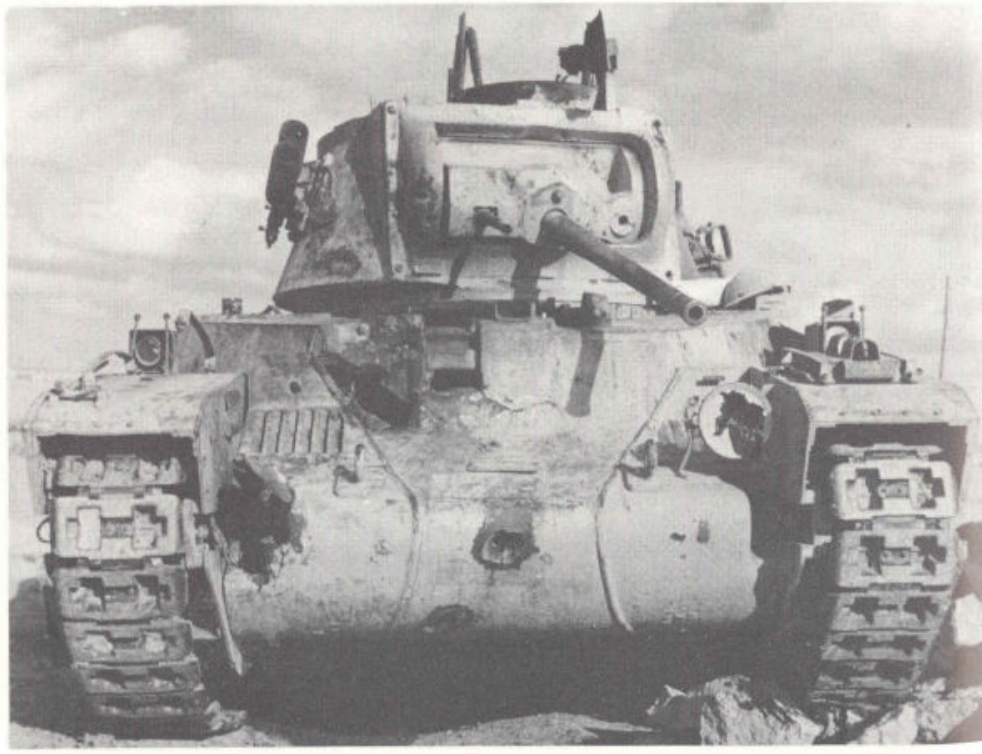
The first Matildas arrived in Egypt in August 1940, belonging to the 7th Royal Tank Regiment. Matildas of this same regiment along with the 4th Regiment had created a somewhat lasting impression on General Rommel, who commanded the 7. Panzer Division, during the Battle of France. A British counter-attack launched near Arras had resulted in German divisional and 88mm anti-aircraft guns being used to repulse the attack. Rommel's report tended to indicate these vehicles were more powerfully armored than they in fact were.

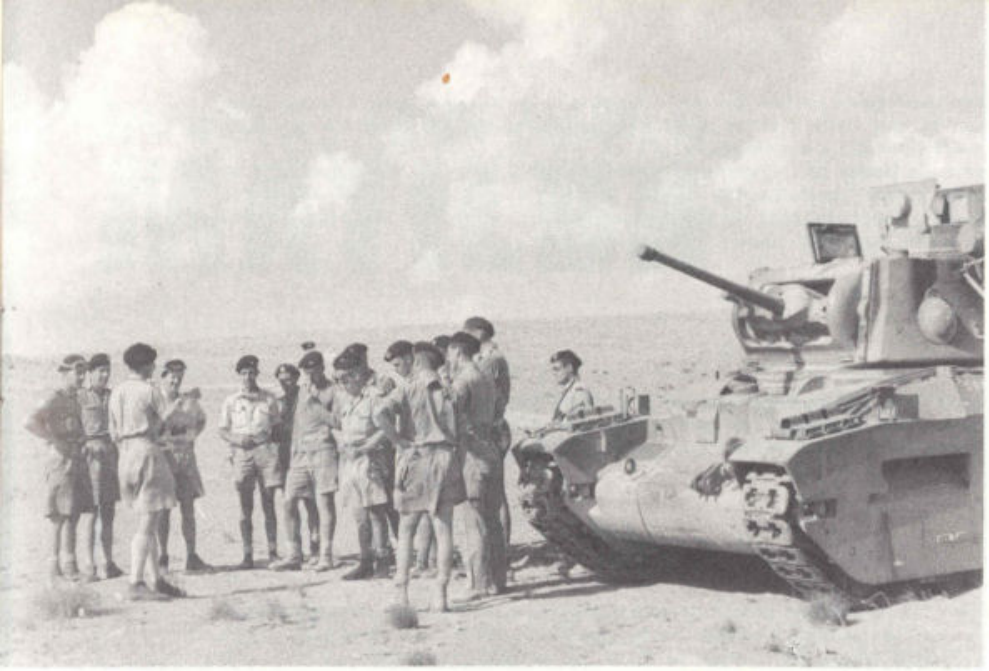


A total of 140 A 11's, Matilda I's had been built. After their removal from service, shortly after Dunkirk, the designation "Matilda" came to be applied to the Matilda II. Production of the A 12 would continue until August 1943, 2,987 A 12's having been produced by that time.

(Below right) At least four direct hits ranging in caliber from 37mm to 50mm have hit this Matilda's frontal areas before it was knocked out. Frontal armor on the Matilda was 78mm, 18mm more than on the A 11. The 3.07 inches of armor could be penetrated by the German 5cm AT gun at a range of 500 yards, the 37mm AT gun could not puncture at all. Even if a direct hit were scored, this would not necessarily insure the tank would be knocked out.

Driver points out the ineffective results of a direct hit from a 20mm Pz. II gun, marked by the gouged area to the right of the gun sight.

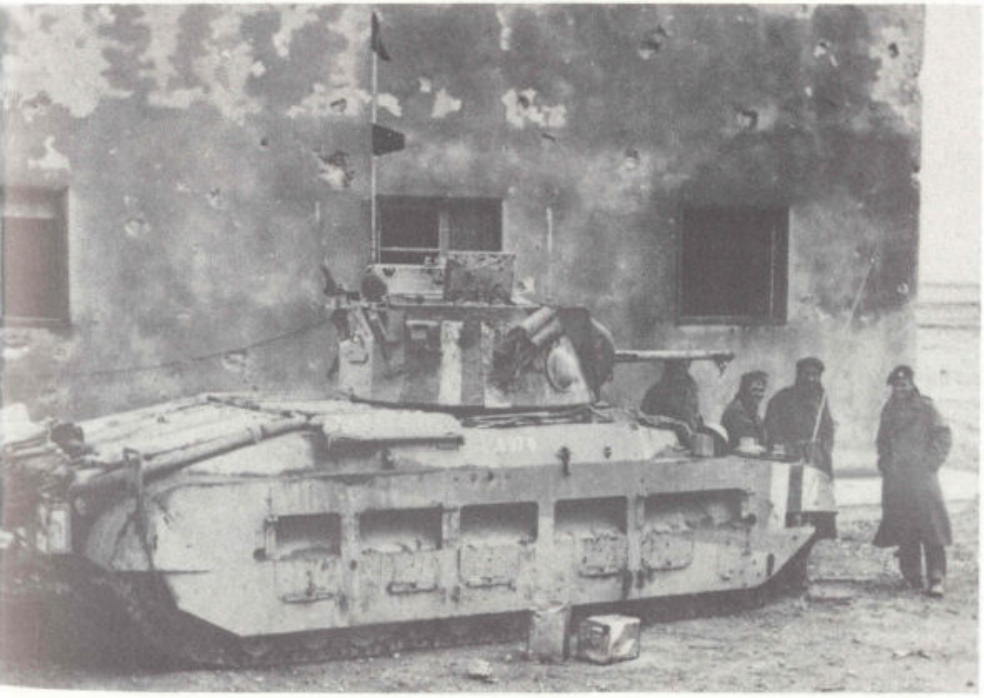




The British commander-in-chief of the Middle East Theater was General Sir Archibald Wavell. This command area included Egypt, East Africa, the Sudan and the area around the Persian Gulf with its oil fields. To protect such a vast area, Wavell could count on 86,000 British and Commonwealth troops. Defending the western approaches of Egypt against the Italian Marshal Graziani's 250,000 troops in Libya were troops of 4th Indian Division and the armored vehicles of 7th Armored Division known as the Western Desert Force and commanded by Lt. General O'Connor.

(Below left) Marshal Graziani's attack against Egypt had been slow in getting off the ground, finally being ordered into action by Mussolini. The attack began on 13 September and after taking Sidi Barrani the advance halted on 16 September. Wavell directed Western Desert Force to prepare plans for the expulsion of the Italians. O'Connor's offensive, Operation Compass, began on 7 December and initially had been intended as a five day "raid." This raid ended two months later and saw British forces in possession of all Cyrenaica. Pictured here is a Matilda of 7th Armored Division outside Bardia, January 1941.

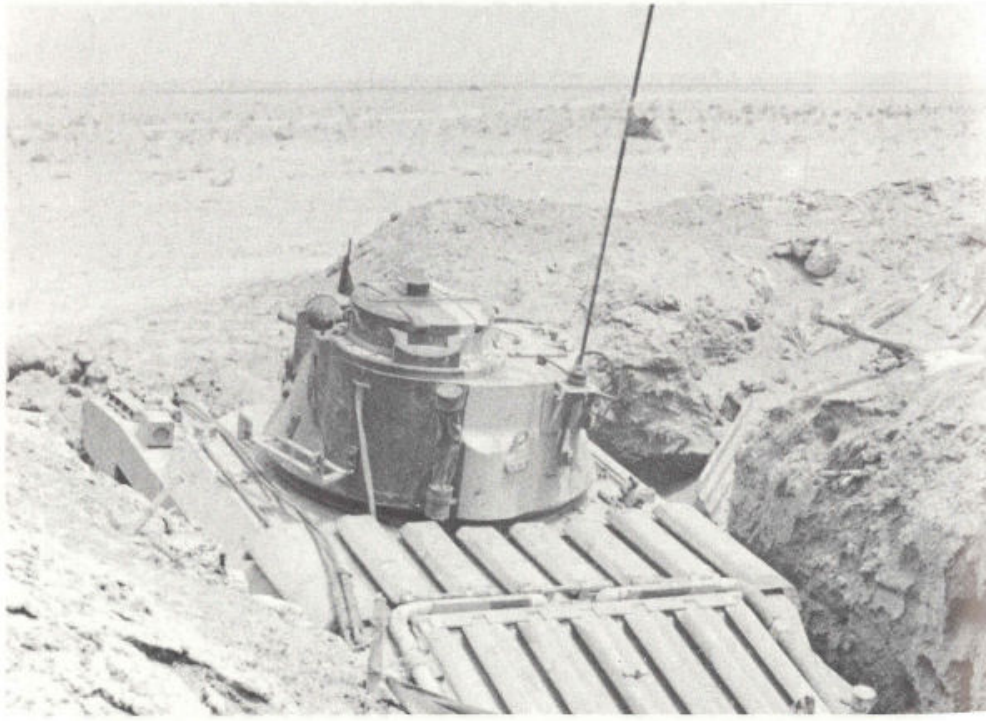
On the first of January 1941, Western Desert Force had been redesignated as 13th Corps and pressed ever westward. In just two months, O'Connor had advanced some 500 miles taking 130,000 prisoners, 850 artillery pieces and 380 tanks.



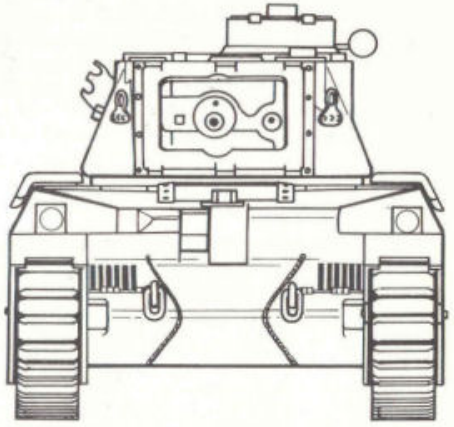
Secondary armament of the Matilda was a co-axially mounted 7.92mm Besa machine gun, with a Bren gun being carried inside for ground use. Turret traverse could be accomplished by an auxilliary hand traverse should the hydraulic power fail. Elevation control for the 2 Pdr was not dependent on power assist methods but rather utilized man-power by means of a shoulder piece directed by the gunner. Also mounted on the right side of the turret were two smoke bomb dischargers.

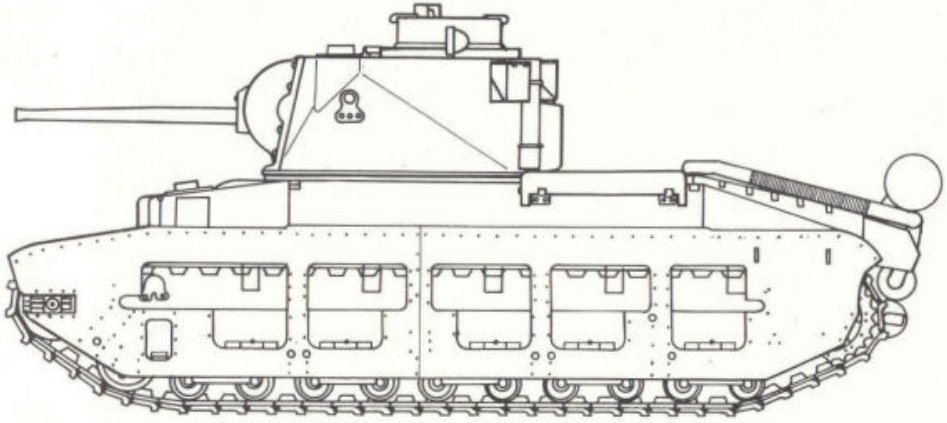
(Below left) Camouflage was an important factor in staying alive on the desert. Two methods for camouflage are demonstrated here, the paint scheme on the tank proper and netting to disguise the tank's position.

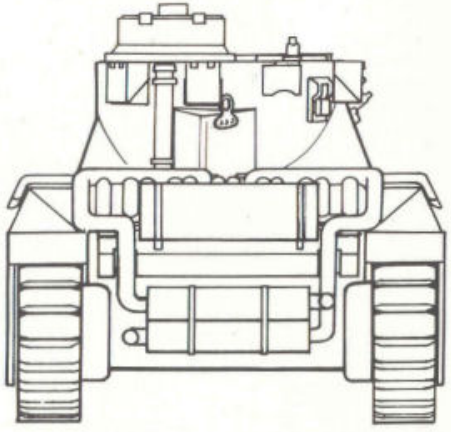
Defensive revetments protected tanks and their crews from damaging near misses of an artillery barrage. Such field works were used during the siege of Tobruk when the British withstood Rommel's constant attacks and allowed the tanks to be rapidly deployed into battle as the need arose.

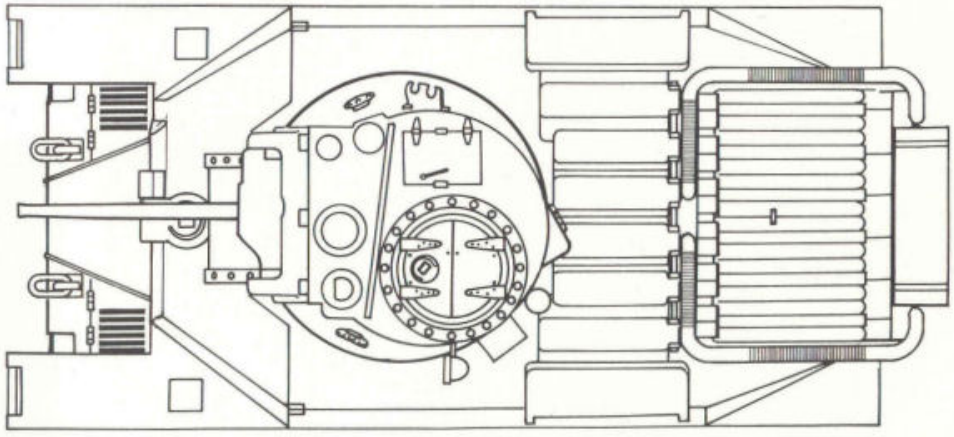


INFANTRY TANK MARK II
MATILDA





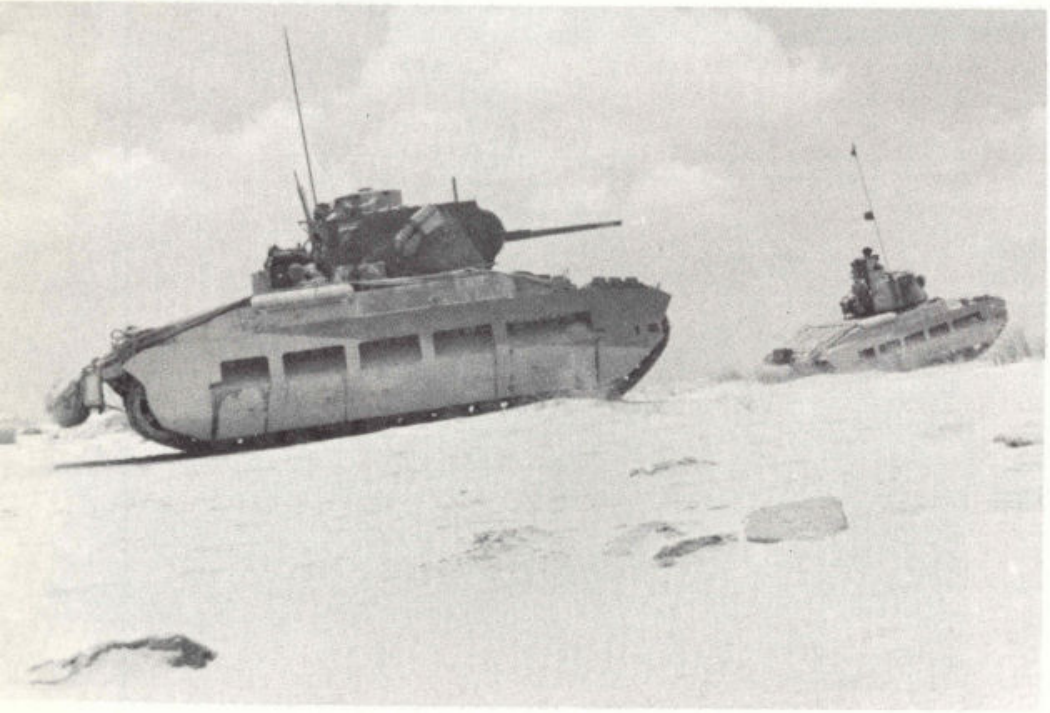




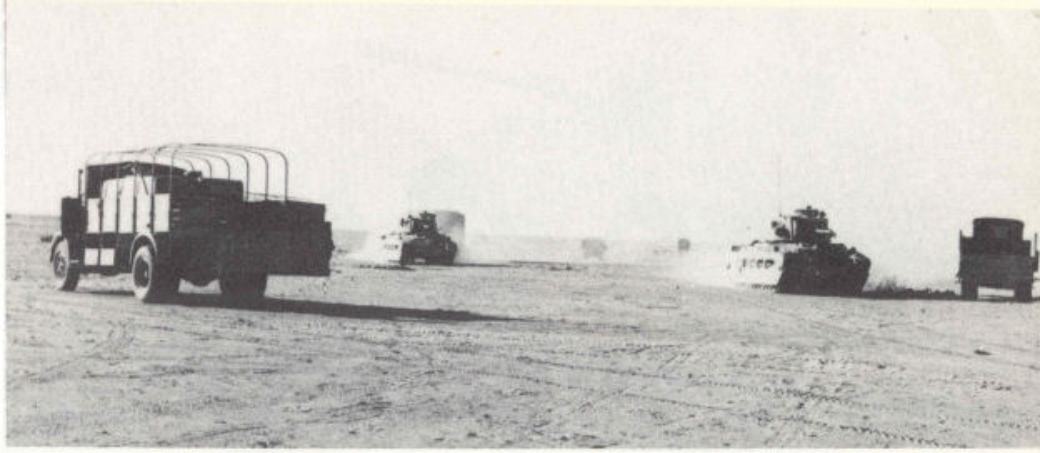
German and British adversaries, Panzer II and Matilda. The power of the 2 Pdr and thick hide of the Matilda made it a much respected opponent. Domination over the battlefield would only be challenged with the arrival of a small number of Special PzKpfw III J's in early 1942. This up armored version of the Mark III had in part been brought about by the ability of the 2 Pdr to penetrate German armor up to 1,000 yards.

(Below left) Maximum speed of the Matilda was a slow 15 MPH powered by two Leyland 6 cylinder engines. Cross country fuel consumption averaged about 1 mile per gallon of gasoline with double this amount being expected on roads. Fuel capacity of 46.5 gallons and the high consumption/mile limited the range over which the tank could operate.

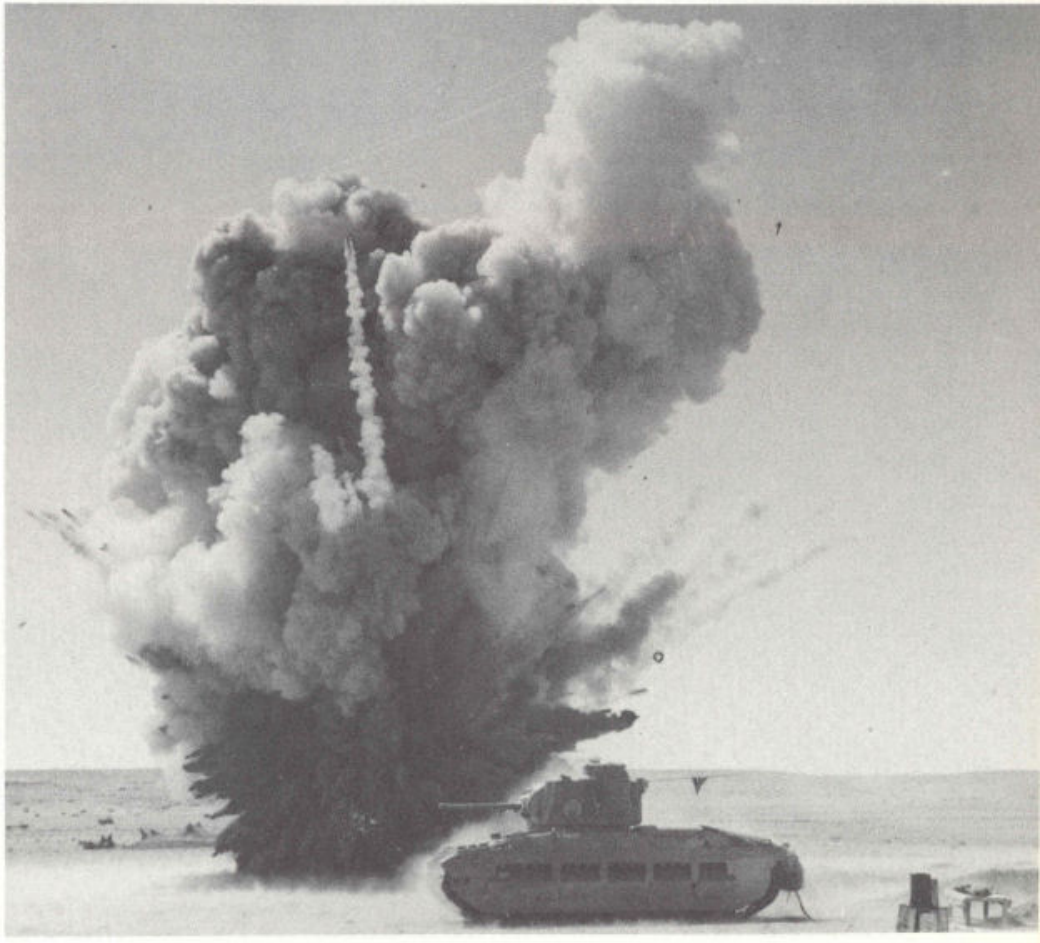
The desert team in action, "I" tank and infantry pass through Italian defensive position typical of those found at Bardia, Tobruk, Gazala, Derna, Mechili, Barce and Benghazi. O'Connor's desert team took each of these and by 8 February 1941 stood ready to press on into Tripoli and complete the job of securing North Africa.



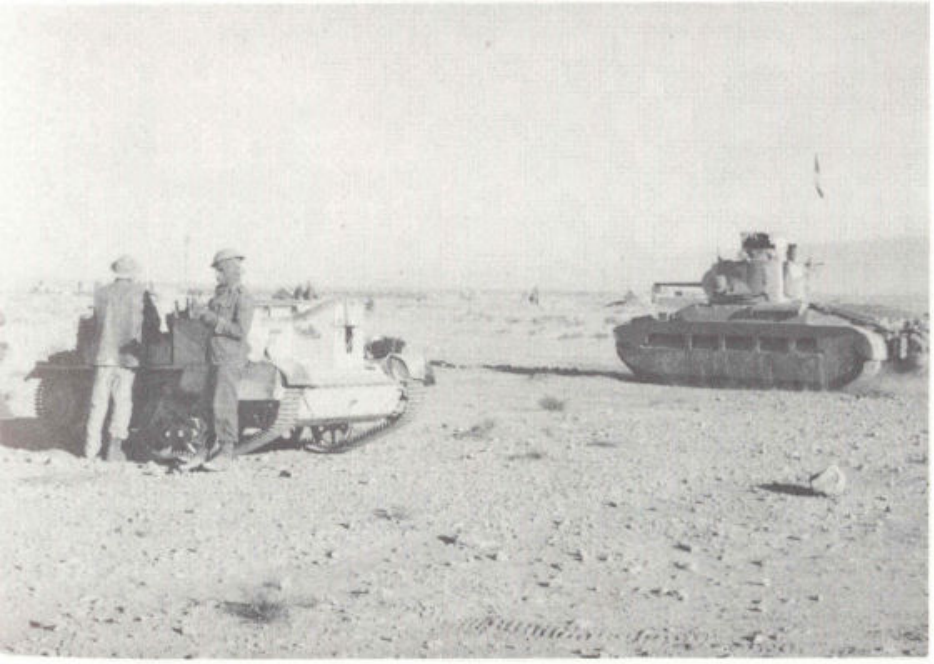
Compass was faced with shortages of every kind. The tanks had to move forward on their own power, no transporters being available. This in turn shortened the operational lives of the engines and tracks. Indeed, transport vehicles were in such short supply that the stockpiles of supplies necessary were placed in the open desert so that the troops could be brought forward in the same vehicles. Later operations, such as viewed here, changed in that supply vehicles moved along with the troops and tanks.

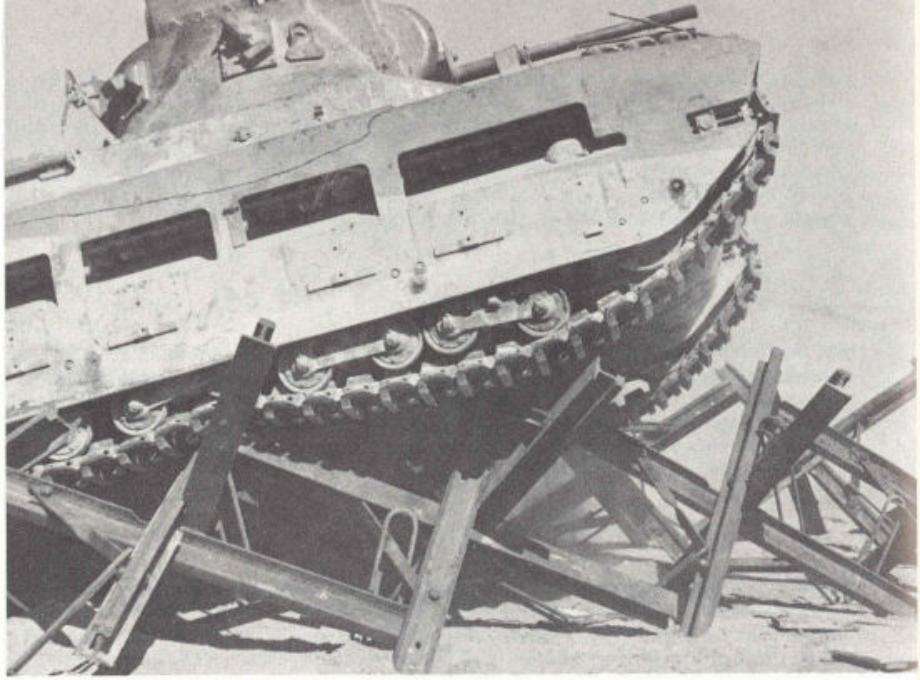


(Below right) Three days after the fall of Bardia, the Italian fortress town of Tobruk had been surrounded and O'Connor stopped to build up his supplies. To extend his own capabilities captured Italian supplies and weapons had been used to maintain the "raids" momentum. On 21 January the attack against Tobruk opened. The hard fought battle raged throughout the day. Here an "I" tank advances through an artillery barrage.

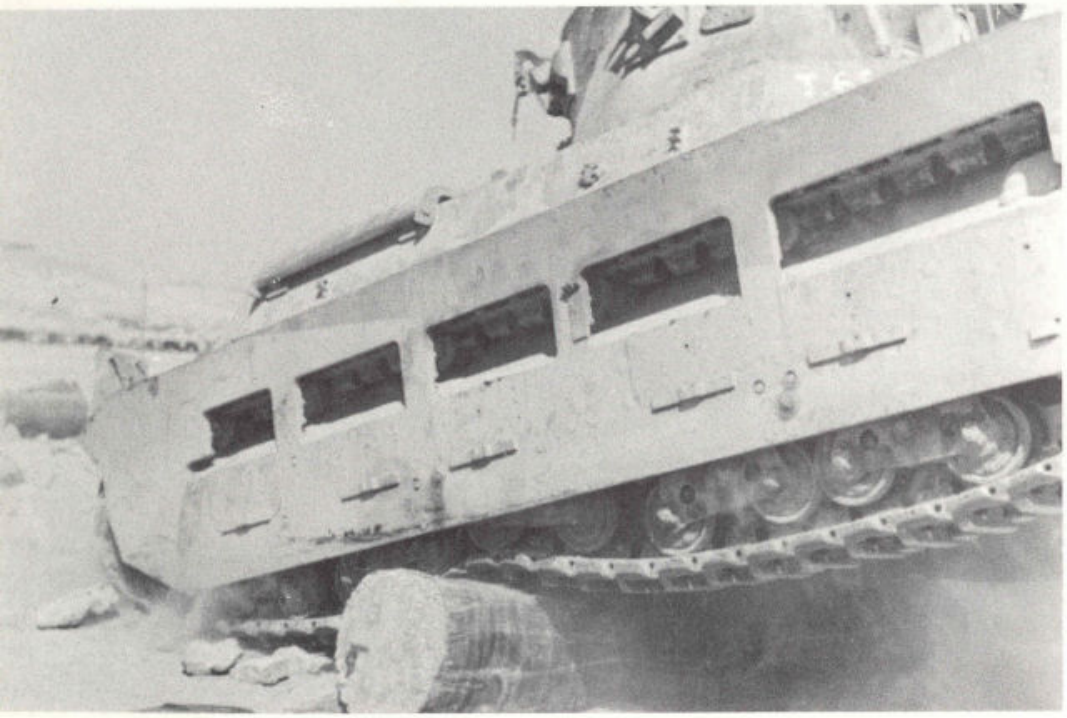


Three important rules apply to desert warfare, all three of which are illustrated here. An army in the desert must bring all its needs, food, clothing, ammunition, gasoline and water, with it. There is no living off the land. The armed force must be mobile and there was a need for speed, clearly demonstrated by O'Connor's Operation Compass. Finally, the desert itself dictates the nature of the battle.





Unsupported tank obstacles could easily be crossed by the Matilda. If, however, such an action, as illustrated, were undertaken where anti-tank weapons were available, the exposed belly of the tank would be an inviting target.



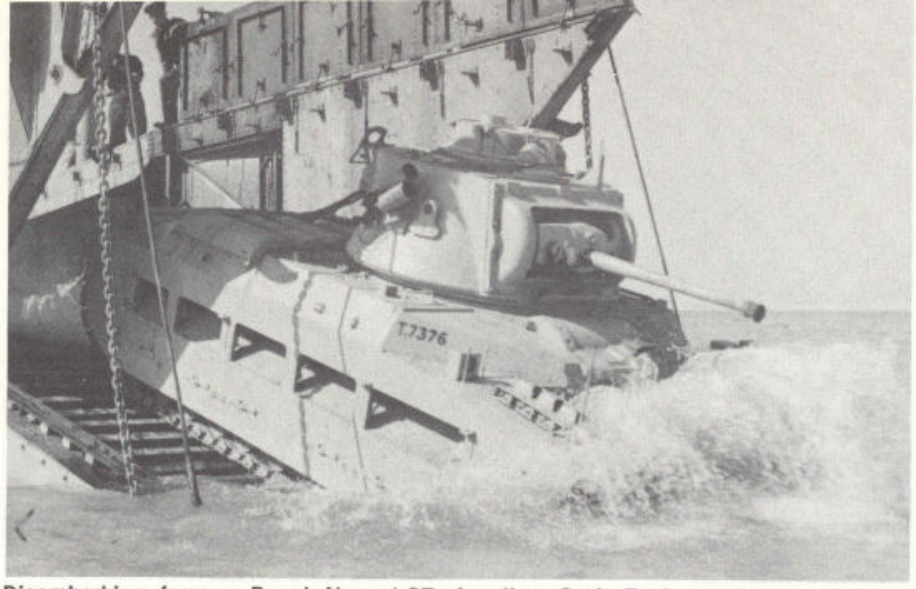
(Above left) During the last week in November 1940, training exercises were held by O'Connor's forces prior to launching Compass. Exact replicas of the Italian camps had been prepared for these exercises. In the field of defensive fortifications the Italians would become known as masters.

The "Japanese type" suspension, ten pairs of small bogies on five bogie assemblies, had been included on the Matilda II design to offset the extra weight of the 2 Pdr and the 78mm of armor. The greater number of wheels of consequence increased the amount of maintenance which had to be performed.

Another duty performed by the tank transporter was that of a recovery vehicle. Later during the war, U.S. medium tank chassis were modified to carry out this role. Being armored they could engage in this activity under enemy fire. ARV's, armored recovery vehicles, towed disabled vehicles from the battlefield whereafter the regular tank transporter took over to return the damaged tank to an Army repair depot.

(Below right) Tank transporters such as this Scammel 30 ton transporter, were intended to haul tanks to and from battle areas, thus saving the wear and tear on the tanks themselves. The early days of the North African campaign saw these vehicles in short supply.

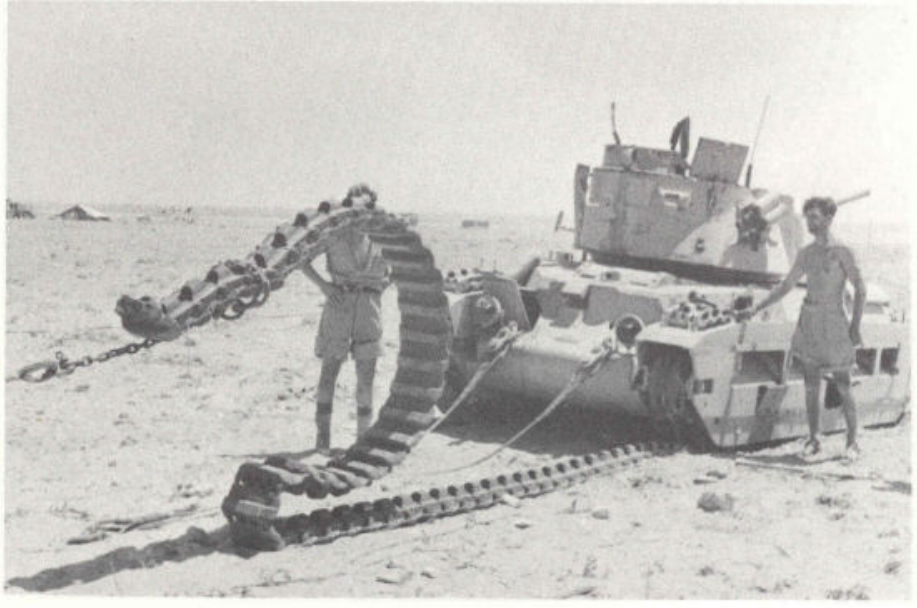
Tanks were an important item of military hardware in the African desert and an item not be be wasted. Overall losses were cut by recovering disabled vehicles and after repairing, returning them to the front. Here a Matilda is being towed to the rear by a heavy artillery tractor. Note the application of the striped camouflage pattern to the tractor as well as the tank.



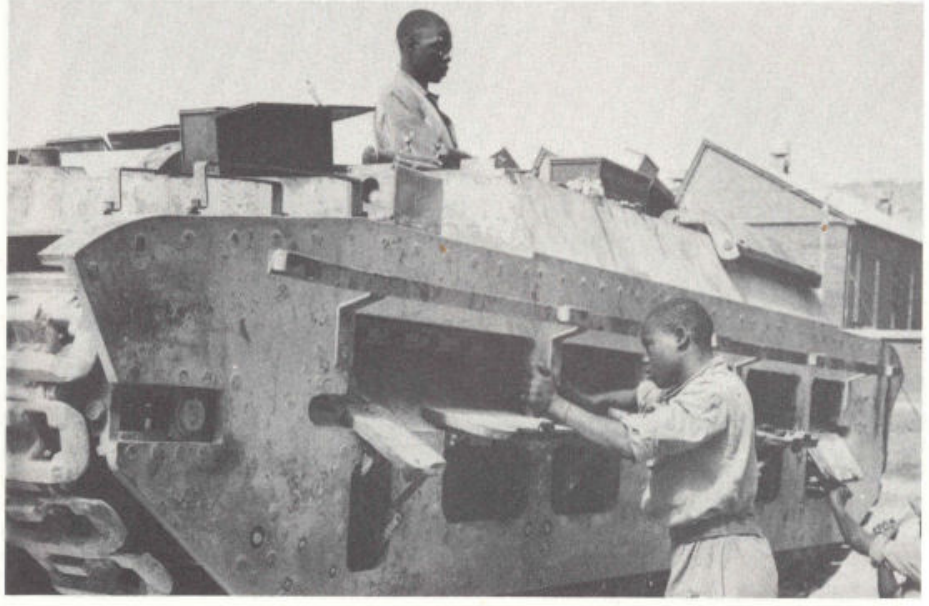
Disembarking from a Royal Navy LCT, Landing Craft Tank, a Matilda practices amphibious operations in the Mediterranean Sea. Matilda's were not involved in a combat amphibious landing within the Mediterranean area but did so in the Pacific with Australian forces.

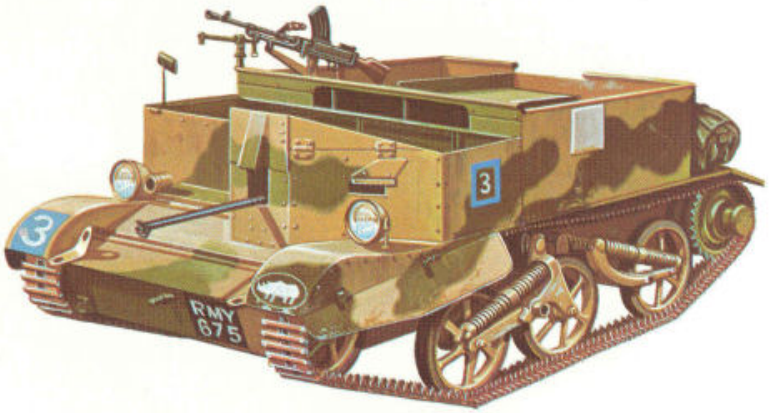
Tank repair depot outside Cairo. Army repair facilities such as this were always busy places but even more so prior to launching a combat operation when every tank possible would be made ready for battle.

Track failure was one of the most common mechanical problems which could take a tank out of action before it had a chance to fire a shot. Each track of the Matilda consisted of 68 or 69 individual links depending upon the type of track used.

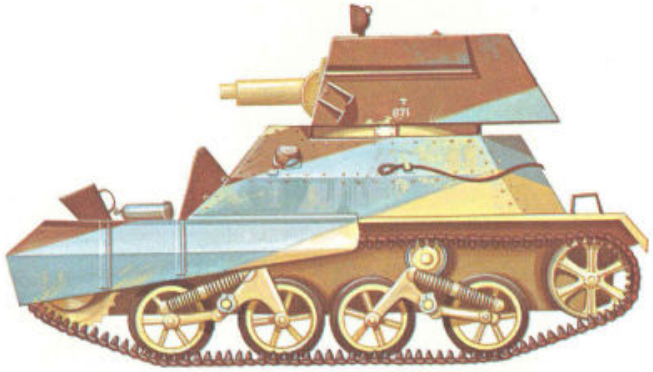


Commonwealth troops, Sudanese, undertake the complete overhaul of a Matilda, the turret of which has already been removed. The armor plated side skirting protected the tracks and roller assemblies from enemy fire but greatly added to the problems of mass production and maintenance. Access panels in the skirt armor allowed some degree of "reachability" for the mechanics. The large slots in the sides enabled mud or sand picked up by the tracks to fall out preventing clogging of the tracks.

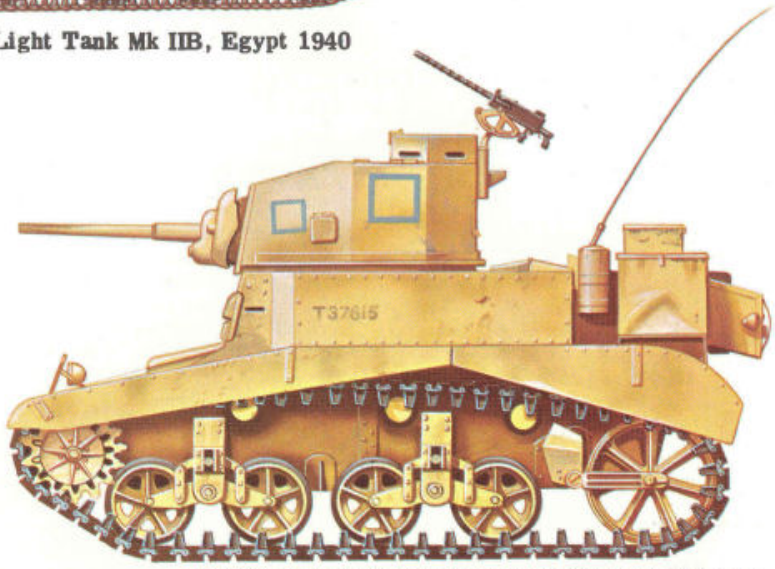




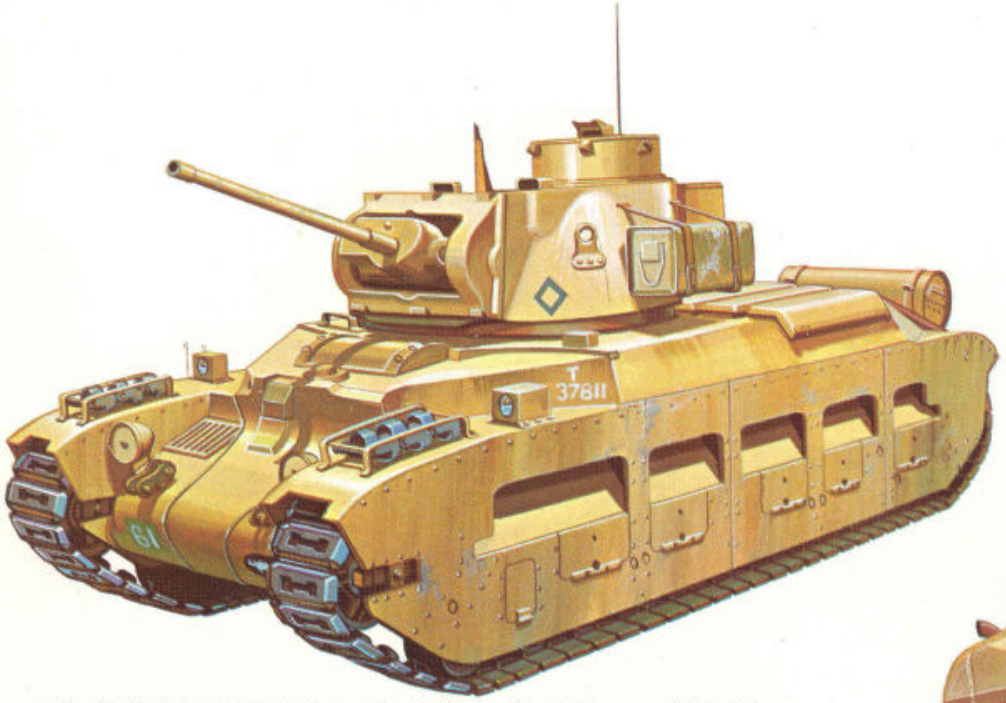
Universal carrier or popularly known as the Bren Gun carrier. 1st Armoured Division, France - Summer 1940



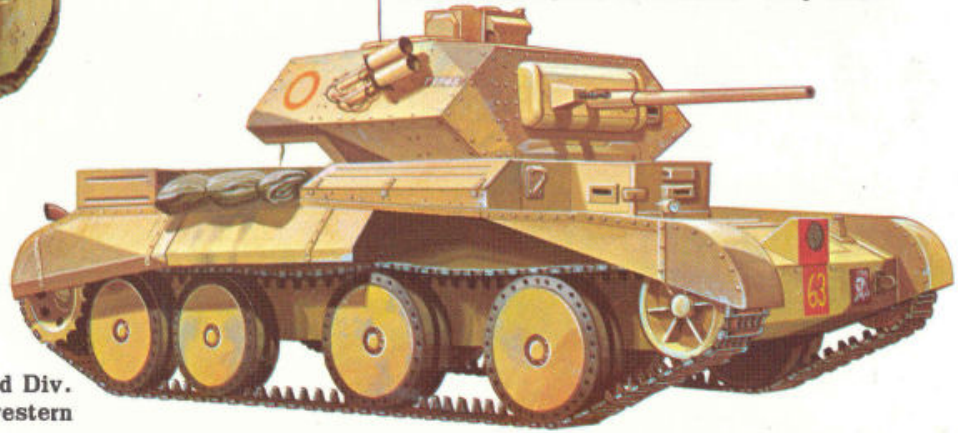
Light Tank Mk IIB, Egypt 1940



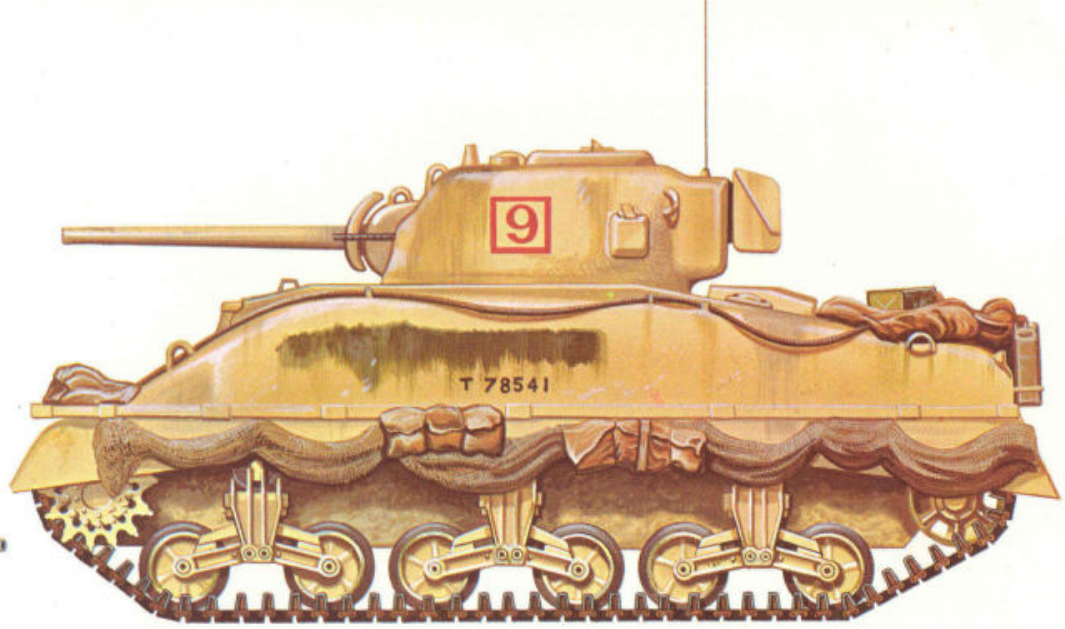
M3 "STUART" popularly called "HONEY" by its British crews. 7th Armoured Division at the time of the first Battle of Alamein - July 1942



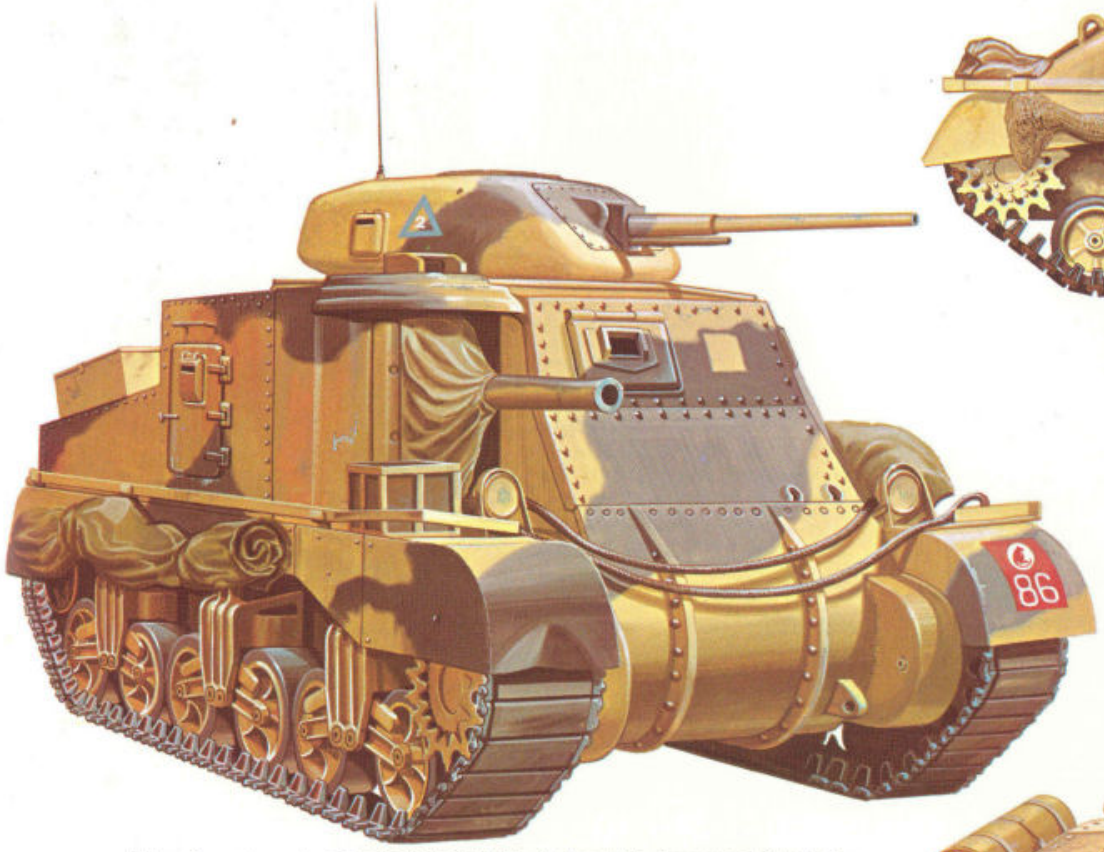
Mk. II "MATILDA' Infantry Tank of the First Armoured Division. Markings indicate a headquarters company of the junior regiment.



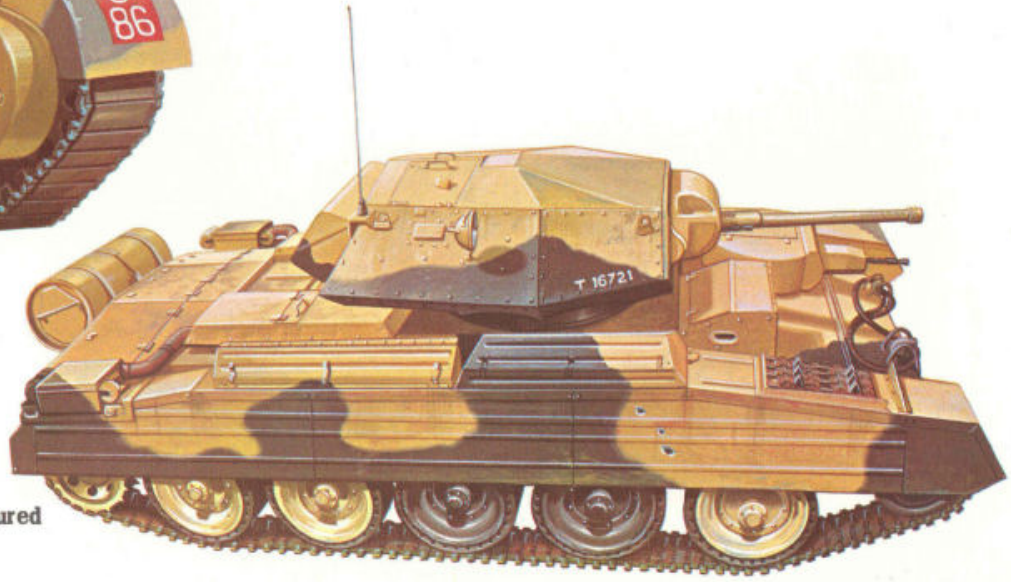
A13 Mk. IIA Cruiser Tank of the 2nd Armoured Div. One of the first armoured units to fight in the western desert.



Sherman Mark II of B Company, Senior Regiment at El Alamein.



The American built M3 'GRANT' of the 7th Armoured Division, 'Desert Rats' at El Alamein.



Crusader II of the 9th Queens Lancers, 1st Armoured Division, December 1941

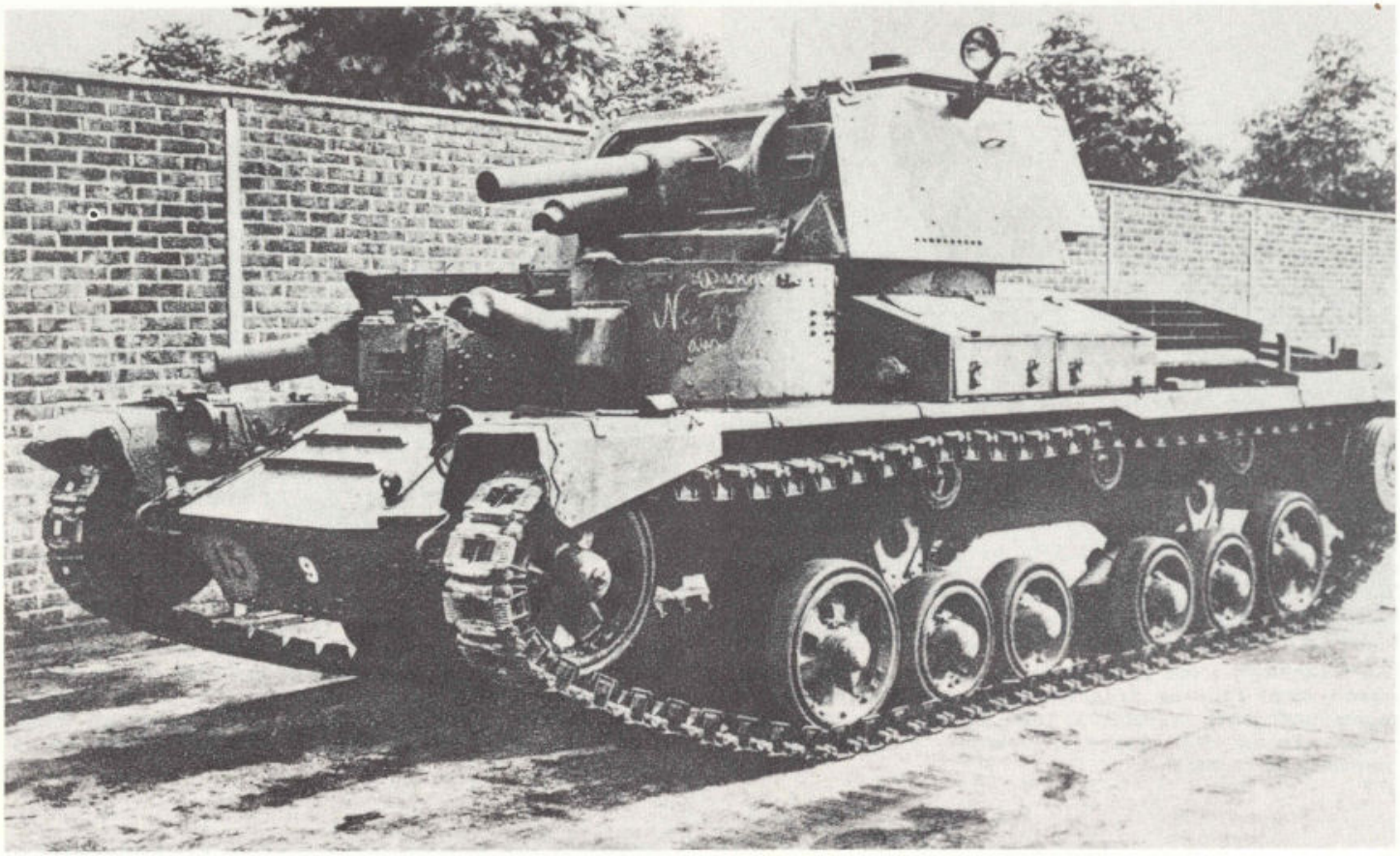
7th Armd. Div.
1939

7th Armd. Div.
later style

As O'Connor's force pressed on in pursuit of the Italians, mechanical failures steadily decreased the number of operational tanks available to him. By the time the assault against Tobruk was launched only twelve "I" tanks, Matildas, remained operational.

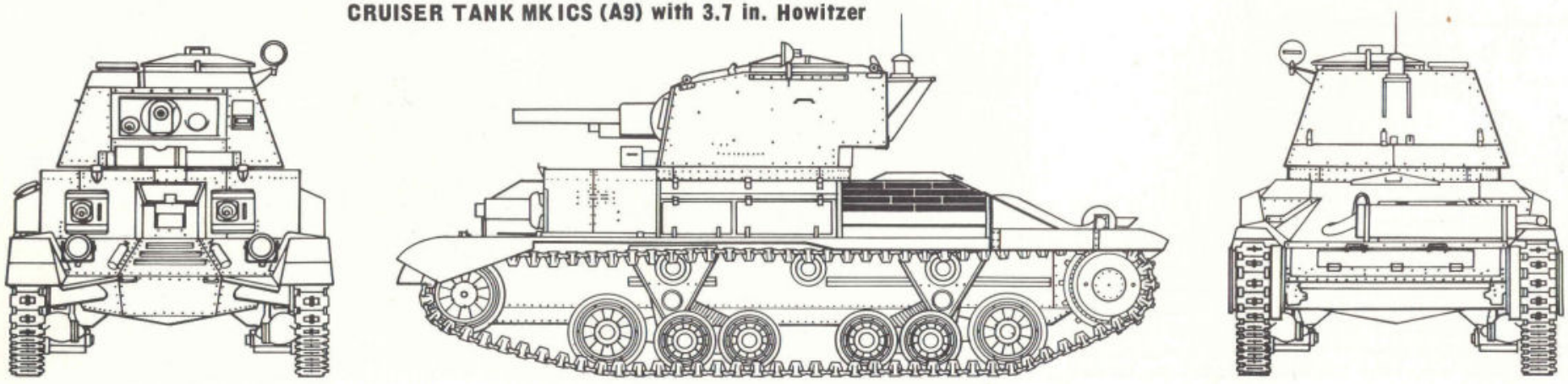
Malta Matilda shows the effectiveness of the camouflage pattern. Rommel's inability to capture the fortress-port of Tobruk during his first drive on Egypt left this British position as a thorn in his side, threatening his lines of communication and supply. If Tobruk was a thorn, Malta was a running sore. Aircraft and naval units based on the island destroyed something on the order of 14% of all material shipped to Africa during the period of the campaign there, losses which eventually dictated the outcome of the war in North Africa.

At first glance this photo may remind the reader of the open spaces of North Africa, especially with the presence of the Matildas. This is not the case however. Close examination of the tank markings will reveal them to be Russian. Large quantities of war material, including these Matildas, were sent from England to assist the Soviets.



A Cruiser Mk 1 C.S. (A-9) in France, 1940. This Mk 1 C.S. differs from the basic A-9 in mounting a 3.7 inch howitzer in the turret in place of the usual 2 Pdr. The most unique feature of the A-9 series cruisers were the two independent sub-turrets, each mounting a Vickers .303 cal MG. The A-9's were used in combat throughout the Battle of France, in Greece, and during the early operations in the Middle East.

CRUISER TANK MK ICS (A9) with 3.7 in. Howitzer



CRUISER MARK II

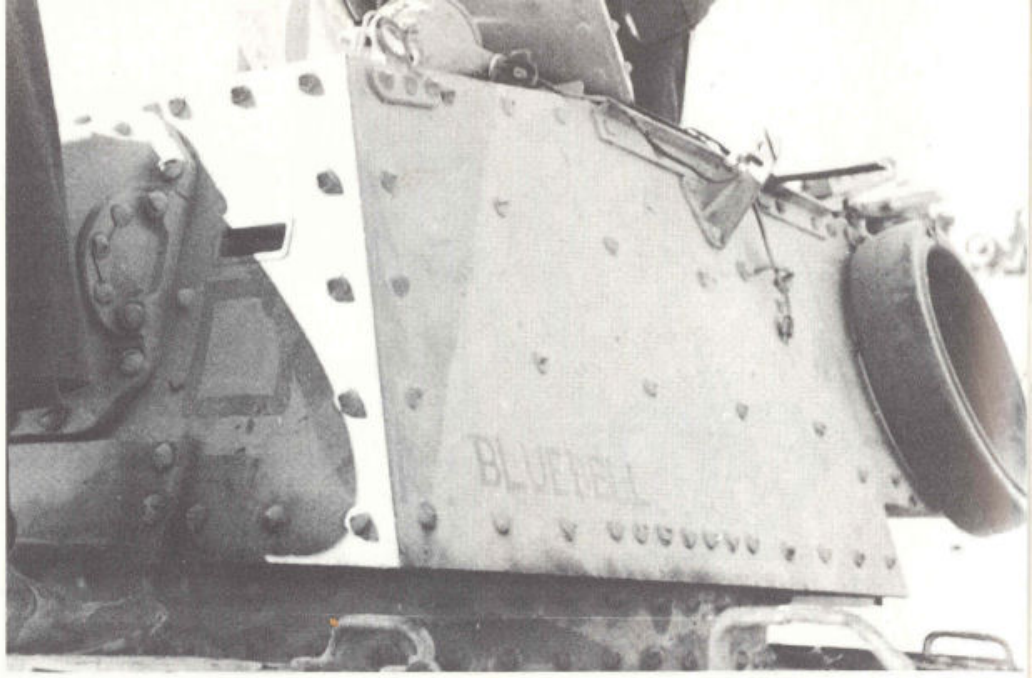
ROYAL ARMOURED CORPS

In an attempt to provide a measure of effectiveness against non-armored targets, a 3.7 inch howitzer was mounted in the A 10. **The 2 Pdr generally found in the** A 10 **did not fire a high explosive shell, thus the 3.7 inch howitzer was a welcomed addition. Known as the** Tank, Cruiser, Mk IIA CS, **only thirty of this close support variant were built. Secondary armament consisted of 2 Besa machine guns, one in the hull and one in the co-axial mount.**

Maximum armor protection of the A 10 is 30mm (1.18 inches). This armor coupled with a top speed of 16 MPH created a highly mobile gun tank. One drawback of high speeds, especially in later vehicles whose speed was greatly increased, was the operational life of suspension components. This fact is illustrated here by the additional stowage of a rubber bogie wheel on the turret side.

(Below right) Statistics have proven that two-thirds of all vehicle casualties can be traced to mechanical failure of some type. Here an A 10 that has thrown a track has been abandoned by the British and now provides a topic of discussion for advancing German forces.

In all probability, O'Connor could have pushed his forces through and taken the remaining Italian forces in Tripoli had it not been for the force of politics. Churchill desired to send troops to Greece to assist the Greeks in their fight against the Italians. Though Hitler had no desire to send his own troops to Greece, assistance had to be sent to bolster the faultering Italians. Entrance of the German forces swung the balance of power and Greek resistance crumbled. British forces arrived too late, no sooner reaching the battle lines than turning about in retreat. Here an A 10, Cruiser Mark II, has been knocked out during the retreat and is being inspected by a German motorcycle messenger.



6th Armd. Div.

A 13, Mark II, Cruiser Mark IVA carried the standard main armament of a 2 Pdr but differed from the Mark IV in that a Besa machine gun replaced the Vickers .303. Tank commander holds mike of the tank's intercom system, through which he can give directions to the driver, just visible directly below in photo.

The changing scene in the Western Desert

On the 8th of February 1941, British forces entered **El Algheila** and marked the high water point of O'Connor's offensive. The bulk of his armored units had been drawn off and sent to Greece to fulfill Churchill's desires to help the Greeks against the Italians. It was believed that the Italians left in Tripoli could be left to themselves for awhile and dealt with after the Greek position had been secured. The remaining units of 7th Armored Division returned to Egypt for rest and repair. Their replacements, the newly arrived 2nd Armored Division, were green troops and only at about half strength. 6th Australian Infantry Divsion, who had been present at the victories of Bardia, Tobruk and Benghazi, were likewise relieved by another untried and under-equipped Australian Division, the 9th. General O'Connor returned to Egypt to become General Officer in Command of British troops in Egypt. General Neame took command of the area, **Cyrenaica Command,** and stood on the defensive.

Four days after the occupation of El Agheila a new face arrived on the North African scene, one who would become most familiar,

Generalleutnant Erwin Rommel. Arrival of Rommel and the first contingent of his yet to be formed **Deutsche Afrika Korps** caused some stirring in Cairo but British intelligence indicated that Rommel could not be ready for military undertakings until mid-April or May, an estimation which closely paralleled Hitler's own orders.

The presence of German troops in North Africa and Greece was not a case of establishing German control in these areas but rather to keep them from being lost to the Allies as the Italians steadily lost ground. Rommel's forces were to be a holding element, possibly used to retake Cyrenaica. Towards this course of action, Hitler had asked Rommel to prepare plans for a reconquest by 20 April and ordered him not to advance further than Agedabia before the arrival of 15. Panzer Division. Rommel was not one to let an opportunity escape however.

A German reconnaissance-in-force had pushed the British out of their positions around El Agheila on 24 March and much in the same manner as General Patton's later to be famous "Rock Soup" method, pushed eastward driving the British before them. The full scale attack began on 31 March.

To meet this new crisis, Wavell ordered O'Connor into Libya to advise Neame. Arriving at the battlefront on 3 April, O'Connor attempted to stabilize the front, but the attempt would be short lived. Both O'Connor and Neame were captured by an advance German unit that had penetrated far behind the supposed British lines, after the car in which they rode became lost in the dark on 6 April. Wavell placed such importance on O'Connor that he offered to trade any six Italian generals in his care for the return of O'Connor; the offer was not accepted.

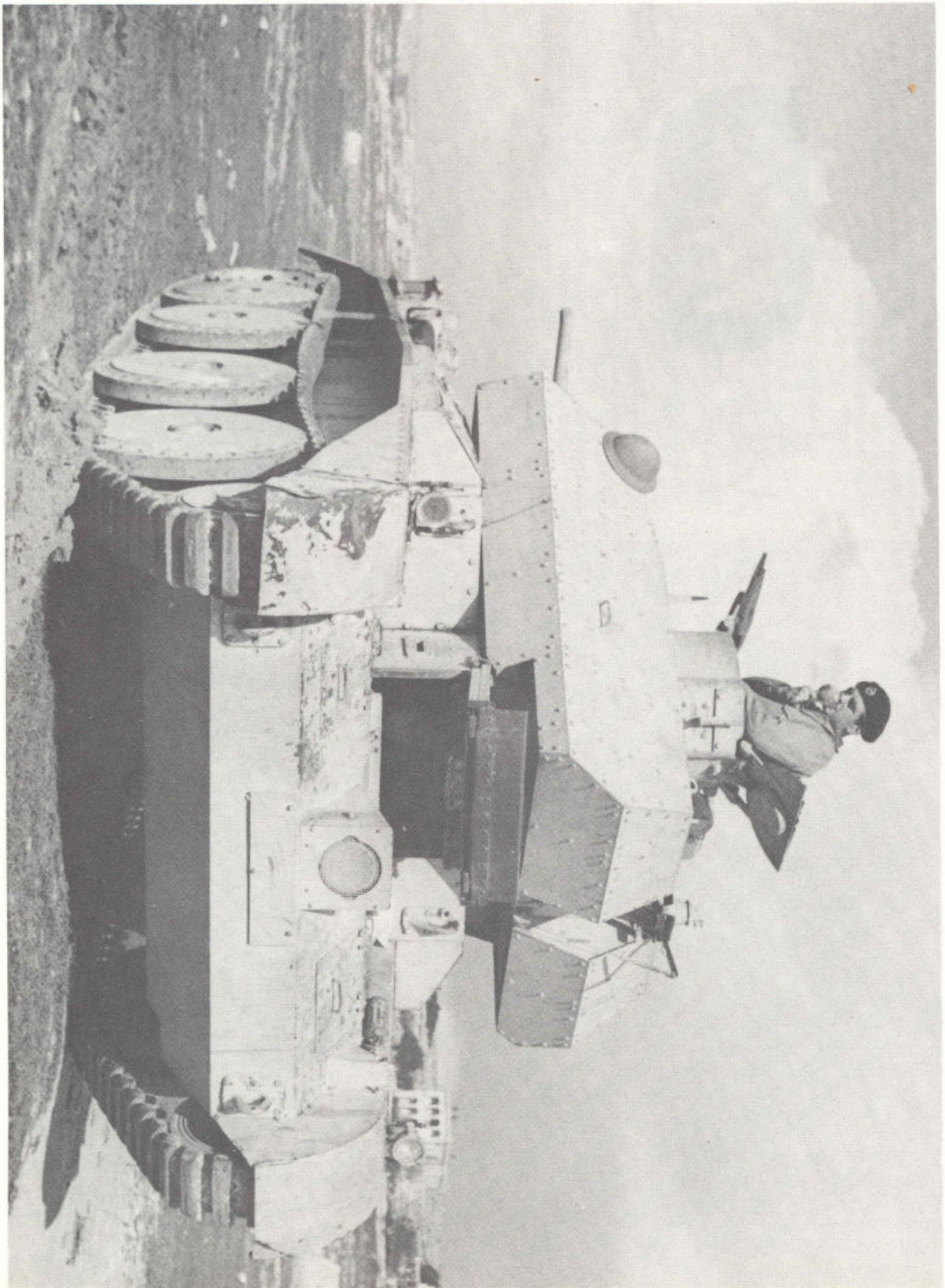
The **Afrika Korps** continued its march, investing Tobruk by 12 April and reaching the Egyptian frontier, where it had to halt due to lack of supplies, on 28 April. Three deliberate attacks by Rommel to take the fortress of Tobruk during April and early May had failed. The garrison settled in for a siege that would continue for some eight months. Rommel could not press his advance into Egypt until the thorn of Tobruk had been removed and his supplies replaced. Tobruk's commander, General Leslie Morshead, told his mostly Australian troops, "There is to be no surrender and no retreat."

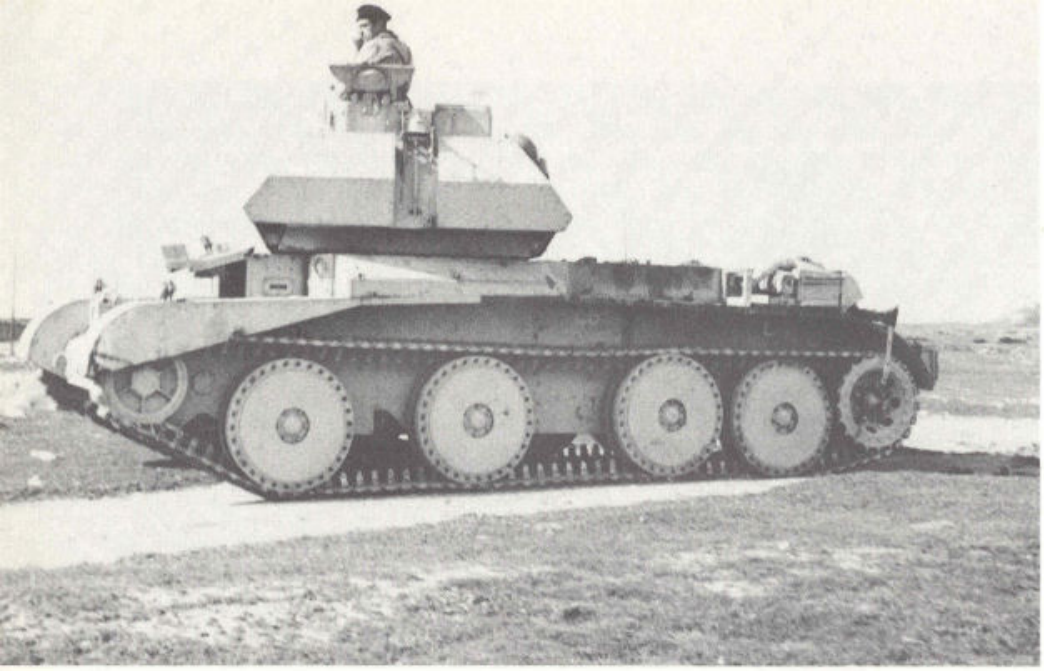
In London, the series of defeats, Greece, Rommel's reconquest of Libya and the fall of Crete, prompted Churchill to press Wavell to launch an attack against Rommel. Wavell's answer would be the hastily planned **Operation Battleaxe,** prepared by General Harding, and General Beresford-Peirse, who was commander of the 4th Indian Division.

The forces available to Wavell for Battleaxe **numbered some 25,000 troops and about 180 tanks, a mixed force of "I" and cruisers. The concept behind the development of the cruiser tank, such as this** A 13, Cruiser Mk IVA **was to provide a tank for mobile operations as opposed to the infantry support tank.**

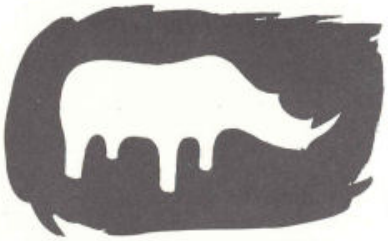
Launched on 15 June, **Battleaxe** proved another defeat for the British two days later. The consequences of the battle extended further than just lost equipment and men, the commander fell as well. Wavell was relieved of command upon orders of Churchill, who did not stop to think that his own actions in pressing for a quick attack had had something to do with the failure. In place of Wavell, Churchill appointed General Sir Claude Auchinleck, who in turn appointed General Sir Alan Cunningham as his field commander. The stage was now set for the initial classic battles between **Afrika Korps** and the **8th Army.**

Cruiser tanks of the 7th Armored Division were in part responsible for the great victory achieved at Beda Fomm. The retreating Italian army was cut off by armored cars and a battery of artillery which held them up long enough for heavier British units, including the A 13's, to arrive and finish the job. By this time the number of operational cruisers in the division had dwindled to 39.



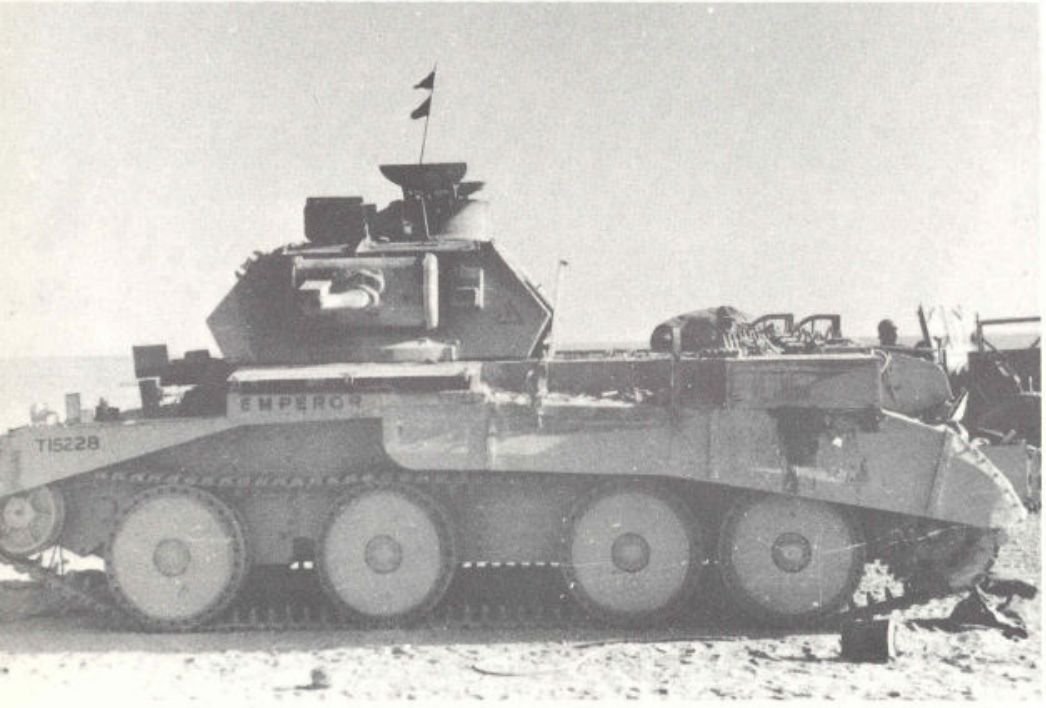


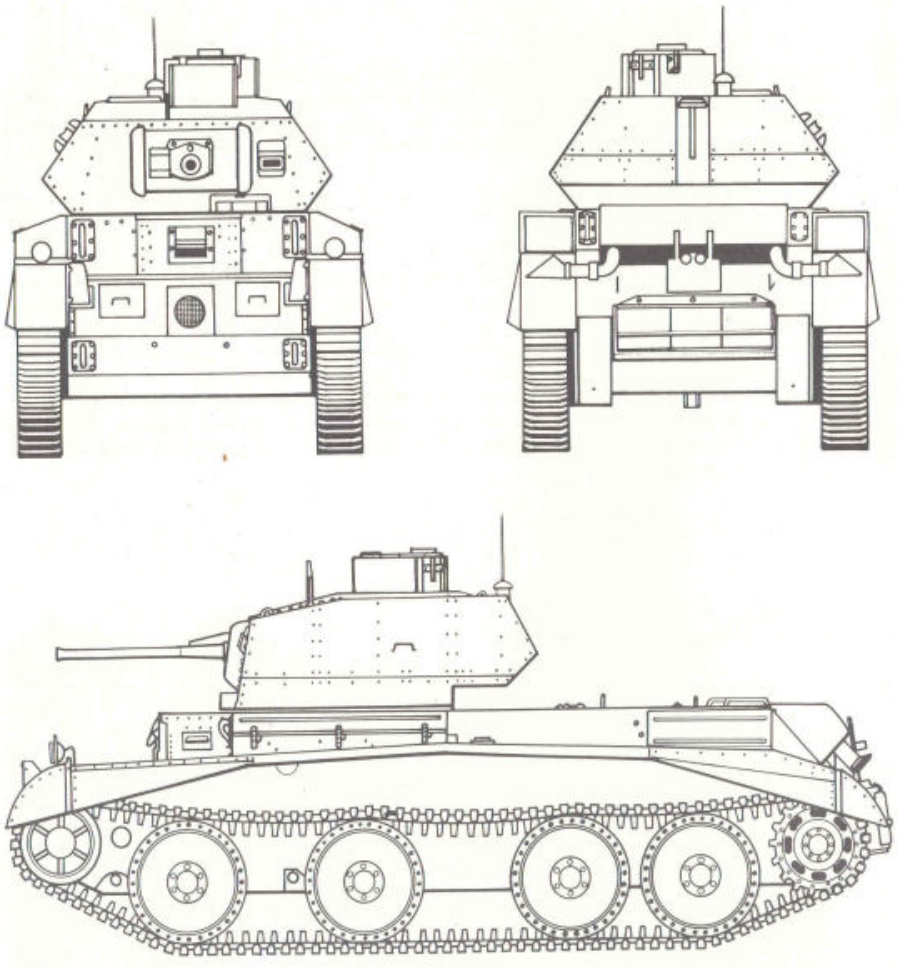
Use of a Christie type suspension on cruiser tanks allowed them to obtain greater speed and mobility. The simplicity of the suspension additionally reduced the amount of maintenance required on the vehicle but other mechanical problems plagued the early cruisers. Powered by a Nuffield Liberty I of 340 HP, the Cruiser Mark IV was capable of reaching speeds of 30 MPH even though its battle weight was 15.68 tons.



1st Armoured Div.

A 13 knocked out during Operation Battleaxe. 7th Armored Division's tanks were badly handled during the operation by higher level commanders inexperienced in armored warfare. 4th Armored Brigade lost 99 out of its 104 tanks, mostly "I" tanks; cruisers suffered as well.

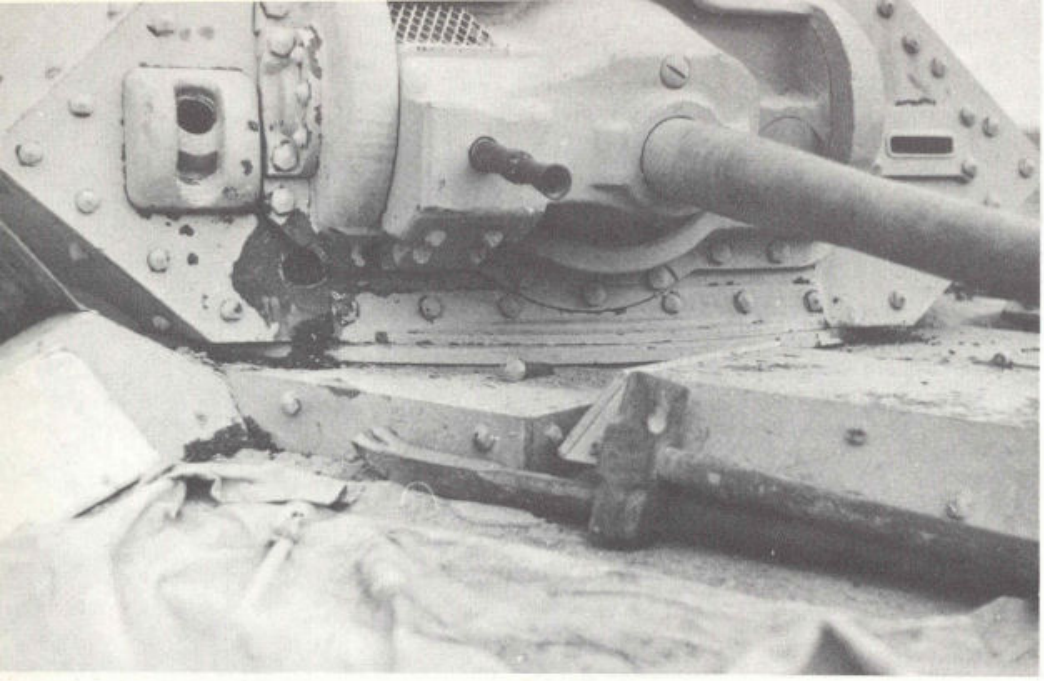




A13 CRUISER

Two of the four man crew of an A 13 display the standard issue protective tank crew helmet. In service, however, the black Tank Corps beret proved to be the more popular piece of headgear worn. The full crew of the A 13 consisted of gunner, loader, driver and vehicle commander. Presence of the gas mask haversack would tend to indicate this photo was taken during training exercises in England.

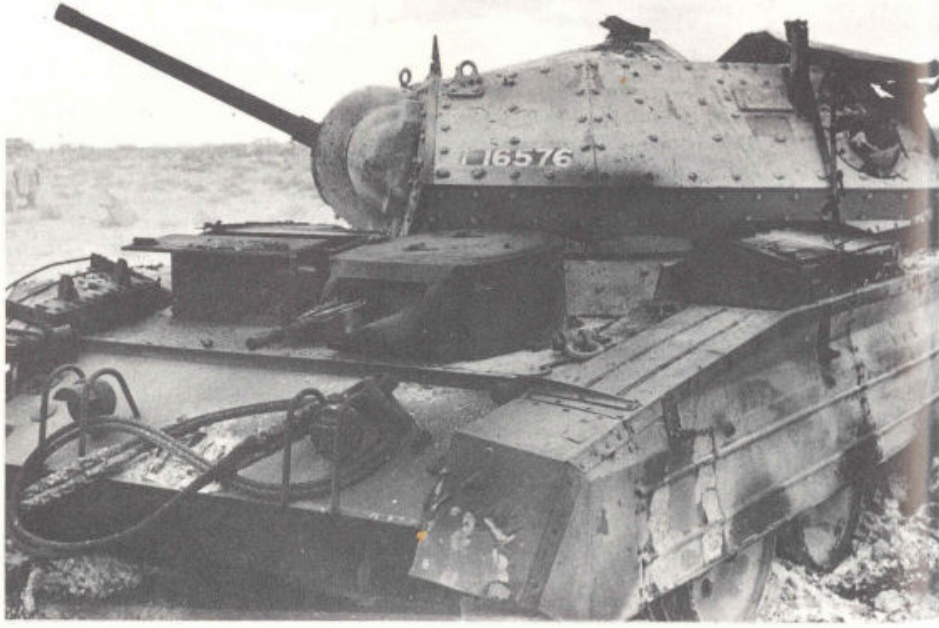
13th Corps



2 Pdr and co-axially mounted Besa, the main and secondary armament of the Crusader II. Turret has been penetrated by German AT shell just below the gun mantlet. Turret is at the 7 o'clock position, hammer and pry bar are stored on the after decking.

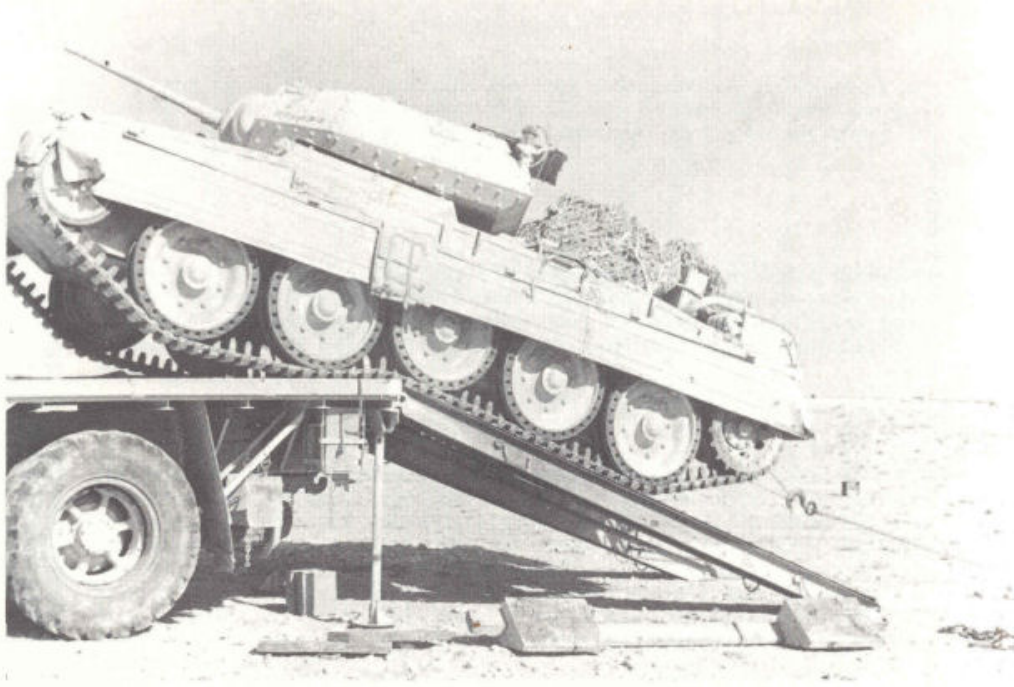
(Below left) Crusader II, A 15. This new tank first saw action during Battleaxe with 7th Armored Brigade of 7th Armored Division. The brigade's tanks came straight off the transport ships and had been specially sent to Egypt from England by orders of Churchill so that Wavell could begin his operation against Rommel.

The main reason for the number of British tanks lost during Battleaxe was the German 88 AA/AT gun. Rommel's use of the weapon in this role and its employment mixed with his own tanks fooled the British into believing that the destruction had been wrought solely by German tanks. If this were the case then the German tanks were certainly more powerful than their own such as the Crusader II. An unusual feature of the Crusader I and II is the location of the Besa machine gun in its own turret. This feature proved unsafe and was eliminated from the Mark III model of the series and removed from many of the I's and II's in the field.



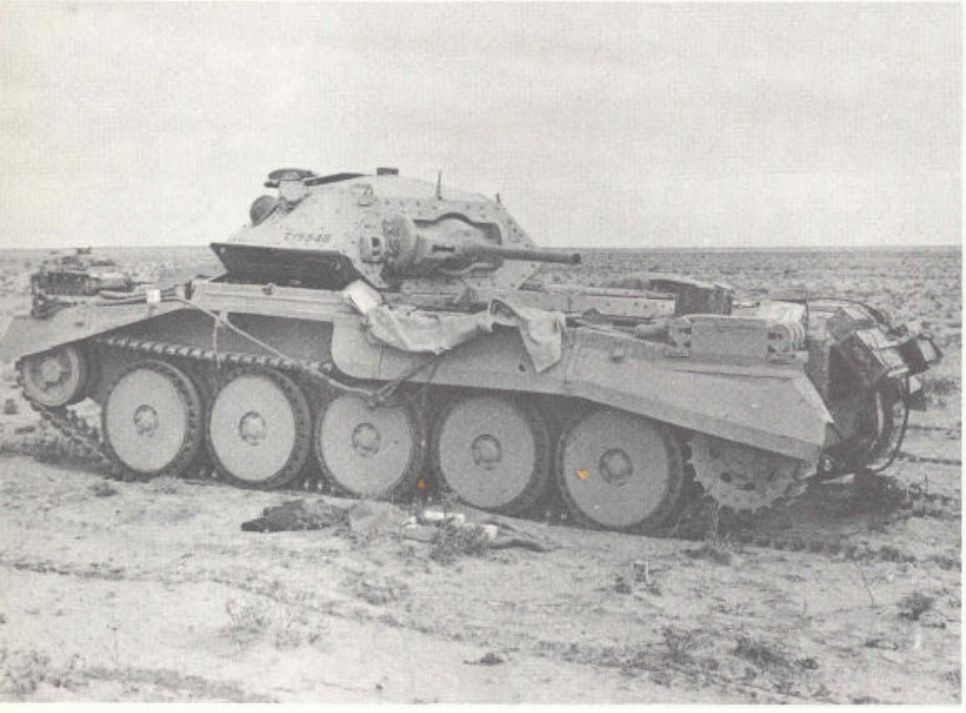
Desert patrol. On September 26, 1941, the desert forces under the command of Auchinleck were renamed 8th Army with General Cunningham its commander.

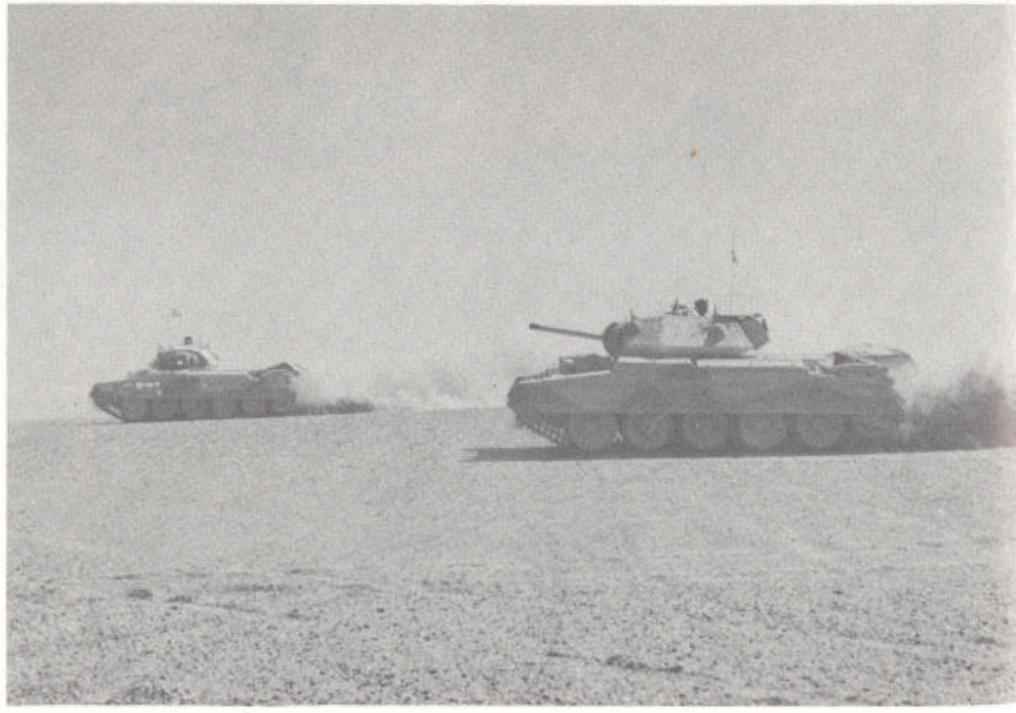
Crusader II **with camouflage net stowed on rear deck disembarks its transporter prior to launching** Operation Crusader.



(Below right) The special convoy which had been run through the Mediterranean carrying the new Crusaders for Wavell had been code named "Tiger." The convoy had brought 238 tanks of various types, but the Crusaders were of special interest to Churchill. These vehicles were referred to as his "Tiger Cubs."

Operation Crusader **was intended as a relieving operation for Tobruk. Auchinleck had spent the summer months of 1941 building up his available forces for this coming offensive, again with the attack being pressed for by Churchill. 7th Armored Division would consist of three armored brigades, whose strength equalled both of Rommel's Panzer divisions, 453 gun armed cruisers of which 66 were U.S. Lend-Lease Stuart ("Honey") tanks.**

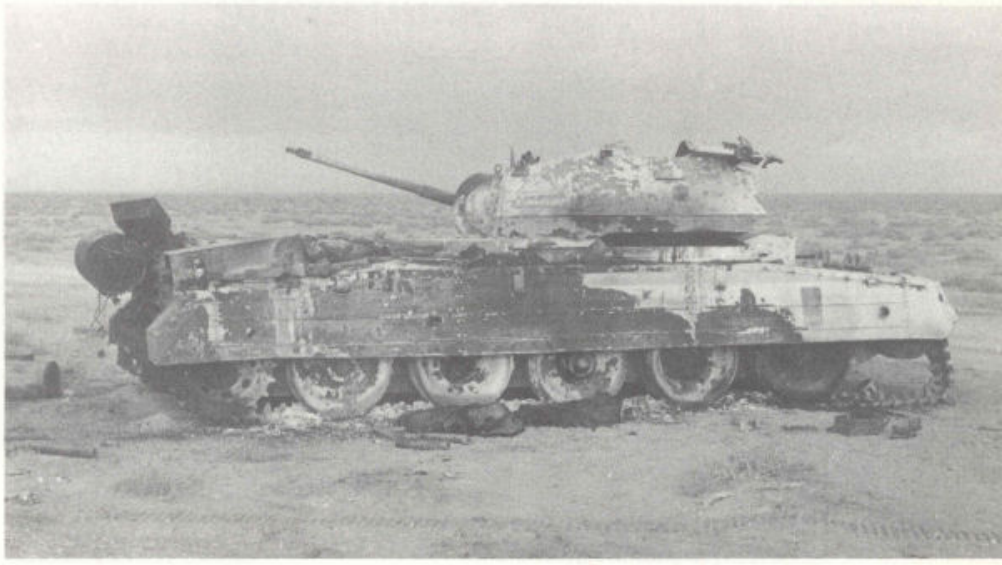




8th Army held a superiority in tanks of about 700, half of them new Crusaders, to Rommel's almost 400, at the beginning of Crusader. Among Rommel's armored vehicles were 35 PzKpfw IV with a short barreled 75mm gun, best suited for firing at "soft" targets; destroyed PzKpfw IV is passed by victor of this contest, an A15.

(Below right) One hundred and ten gallons of fuel in the main tanks and an additional thirty gallons carried in the auxiliary tank on the rear allowed the Crusader II a range of 146 miles overland and 200 miles on roads. The auxiliary tank could be jettisoned from within the fighting compartment if need be. The presence of the auxiliary tank presented a serious fire problem if hit.

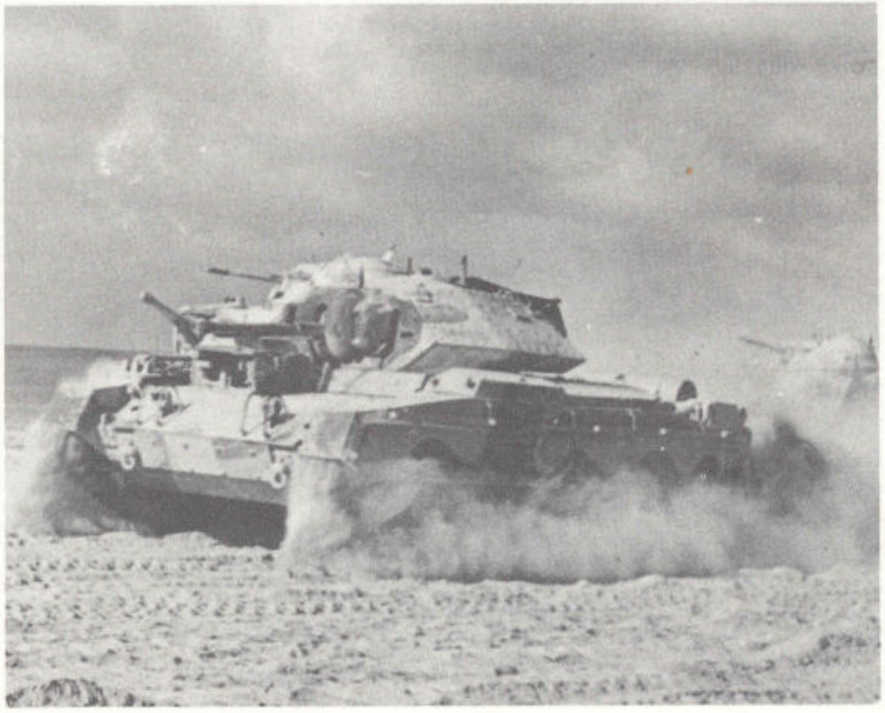
One of the most hotly contested battles of Crusader raged about the Sidi Rezegh airfield, which had been taken by 7th Armored Brigade. The airfield had fallen so quickly that several aircraft were destroyed on the ground with three flying to safety. The battle continued for two additional days with the Germans finally regaining control until their withdrawal. Here, a Luftwaffe enlisted man assists a wounded "Tommy."



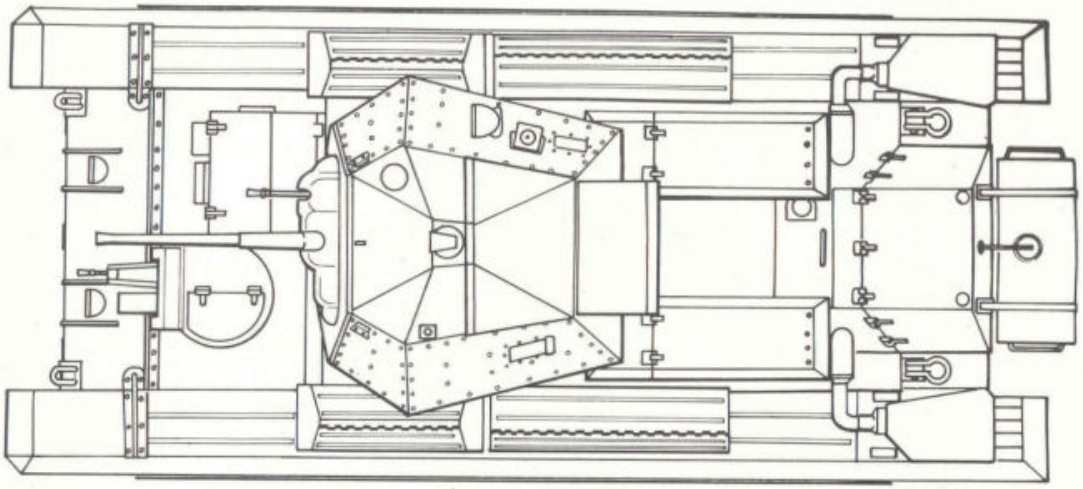
Begun on 18 November, Crusader continued until 7 December 1941. By this time the 8th Army's commander had been replaced due to battle fatigue, the garrison at Tobruk had joined the 8th Army and Rommel was down to 30 operational tanks. A withdrawal had to be made, not a rout but an orderly withdrawal through Cyrenaica. By January 1942, Rommel had returned to the same positions from which he had begun his campaign nine months previously.

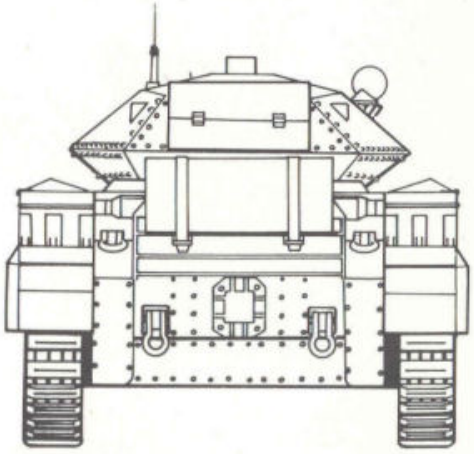
(Below left) The most common point found between all infantry tanks was the tremendous amount of punishment which could be absorbed and still remain in operation. At least a dozen direct 5cm hits impacted this Valentine II, identified by the small, two man turret, before the vehicle was completely knocked out. In the background we can see what is meant by "the fog of battle," as German tanks pass to the horizon.

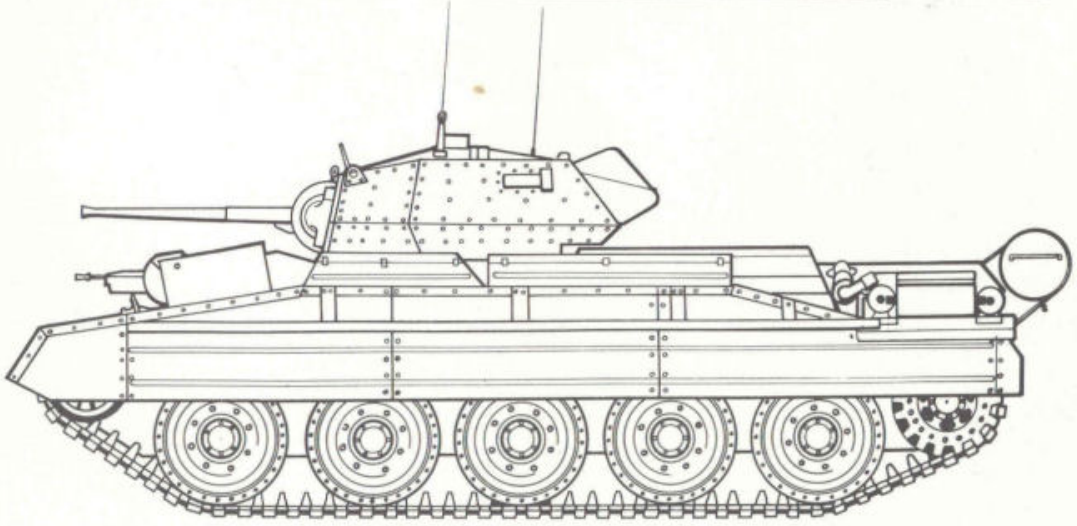
Early in 1942 U.S. Lend-Lease Grant tanks began to arrive for the British forces in the Middle East. Crusader regiments were integrated with the new Grants on the basis of two squadrons of Crusaders for each squadron of Grants. Here this new team is shown operating on the desert, Grants directly behind and to the right of the Crusader II, cruiser tank Mark VI.

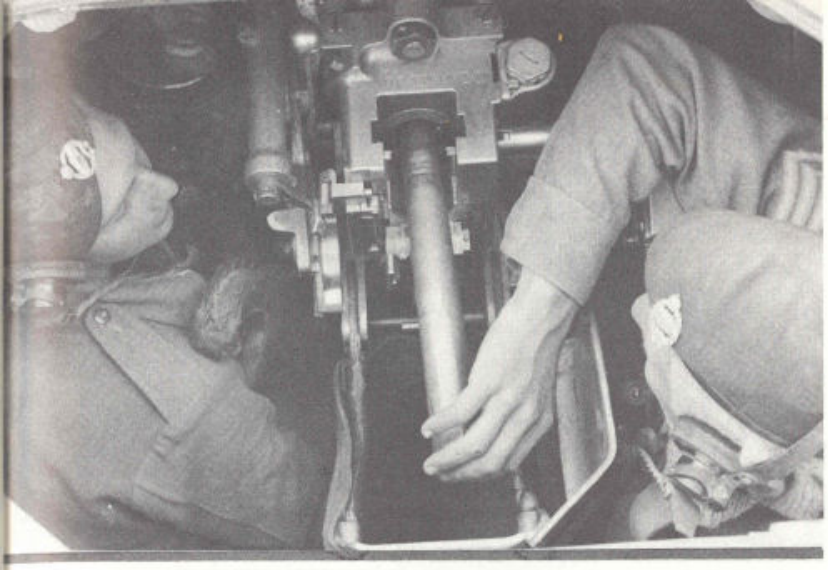


CRUSADER II









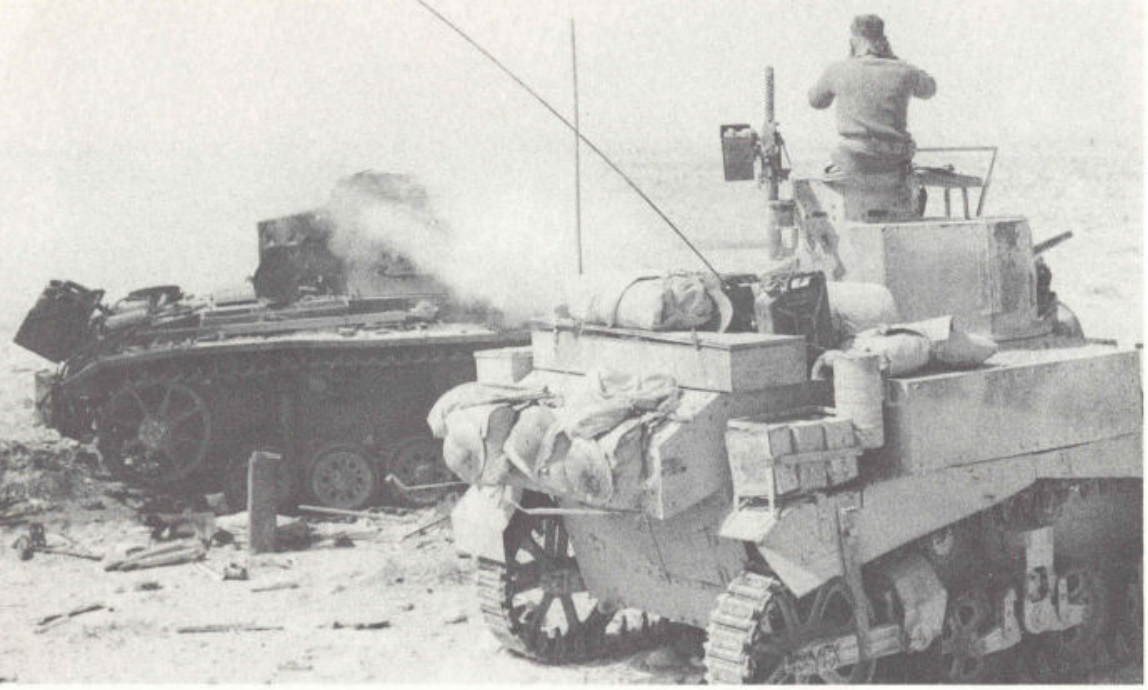
A 11 Valentines which served in North Africa until 1942 were armed with the 2 Pdr gun. After this date an improved model with a 6 Pdr was introduced. The gunner, on the left, aimed the gun by traversing the turret and using the shoulder brace for fine adjustments, free elevation. On the right is the commander/loader; the remaining crew member, the driver, is seated in the forward part of the hull. The cap badge worn on the black beret, is the insignia worn by the Royal Tank Regiments. This illustration would be typical of all 2 Pdr armed tanks.

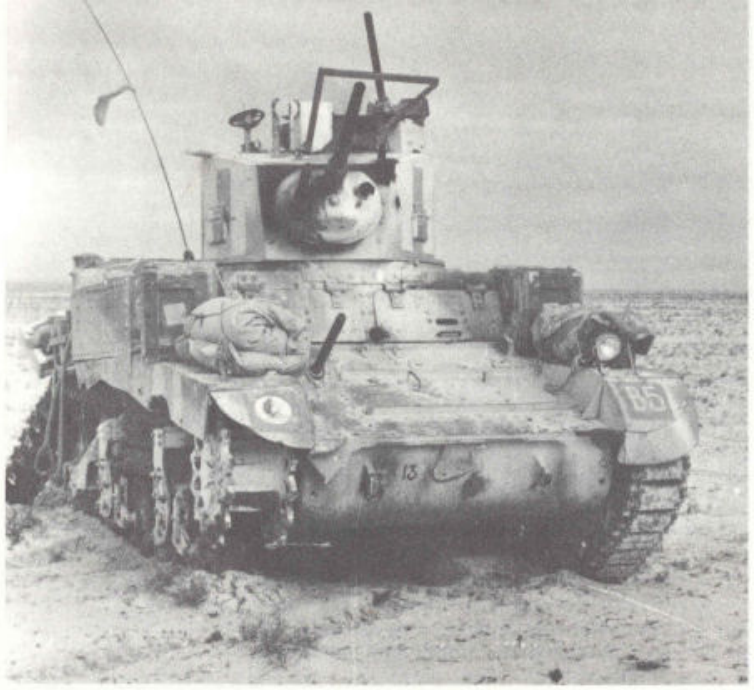
ROYAL TANK REGIMENT

(Left) A maximum of 65mm (2.56 inches) of armor protected the crew of the Valentine. With 36 gallons of fuel aboard, range of the vehicle was 90 miles on the road, less going across country, of course. The low speed of 15 MPH, on the road, reflected its infantry support role. Despite this fact and to meet the requirements for cruiser tanks to fill newly created armored formations during 1940-41, Valentines were issued to armored regiments in England. The Valentine first appeared in action with the 8th Army in June 1941.

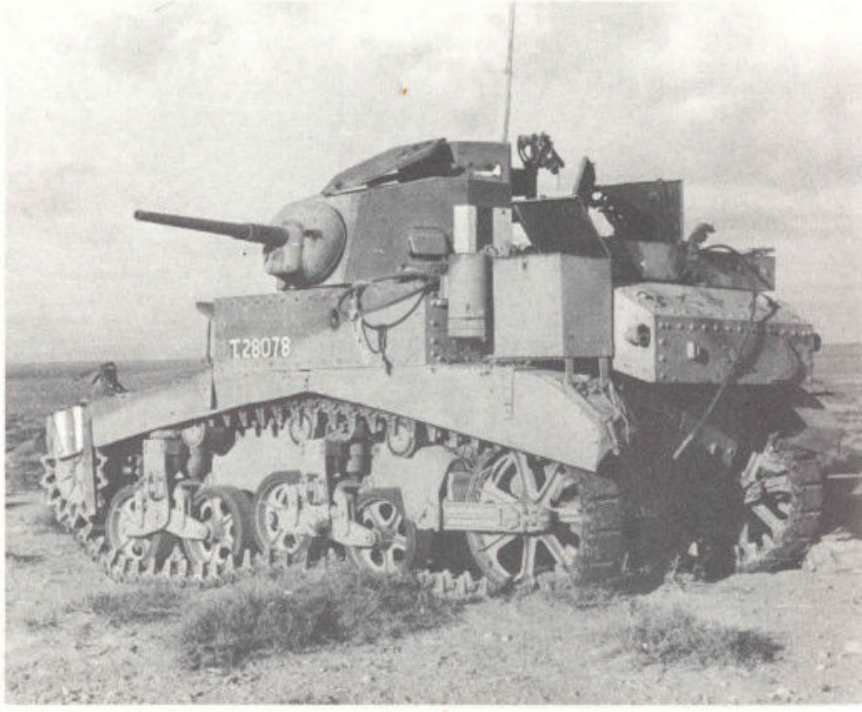
With the exception of the first 30 Canadian produced Valentines, the remainder of the entire Canadian production run were sent to the Soviet Union, 1,390 in number. An additional number, almost 1,300, of British produced vehicles were likewise shipped between 1941 and 1943. Apart from the shortcomings of the 2 Pdr, now outgunned on the Eastern Front, the Soviets were pleased with the vehicle, asking that more be sent.

Due to the extreme temperatures which could occur during the Soviet winter, early Valentines gave a problem with their tracks. In temperatures between 0° and -20°, snow packed in the tracks and created added strain on them. Below this temperature range, the snow powdered and caused no problem. As viewed by this German trooper on the Eastern Front, the problem with this Valentine lay not in snow breaking the track but rather the result of an AT hit, the flight of the shell may be traced through the left track and into the hull nose.





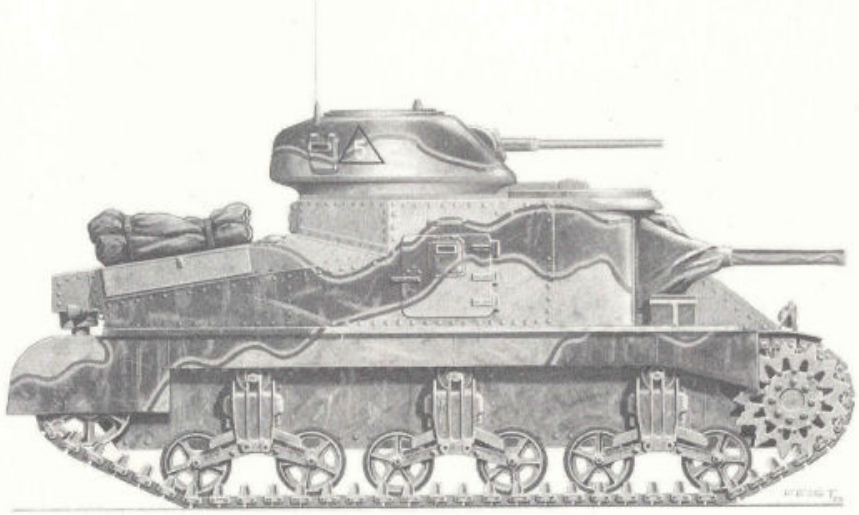
A high velocity 37mm gun gave the "Honey" the striking power to meet the German Panzer III's and IV's on decent terms. Its small size and terrific speed often turned the tables in its favor. Here a "Honey" uses a burning PzKpfw III Ausf J as cover while performing one of its usual functions, reconnaissance. Note should be made of the "liberated" German Jerrican on the rear deck. This liquid carrier had proven far superior to the 4 gallon tins used by the British. Such a prize of war was a most desirable item.



(Above right) The "Honey" was first blooded at the battle of Sidi Rezegh during Operation Crusader, where they equipped all three battalions of the 4th Armored Brigade, 7th Armored Division. This vehicle, from the 8th King's Royal Irish Hussars, was "brewed up" by a 5cm round through the driver's plate.

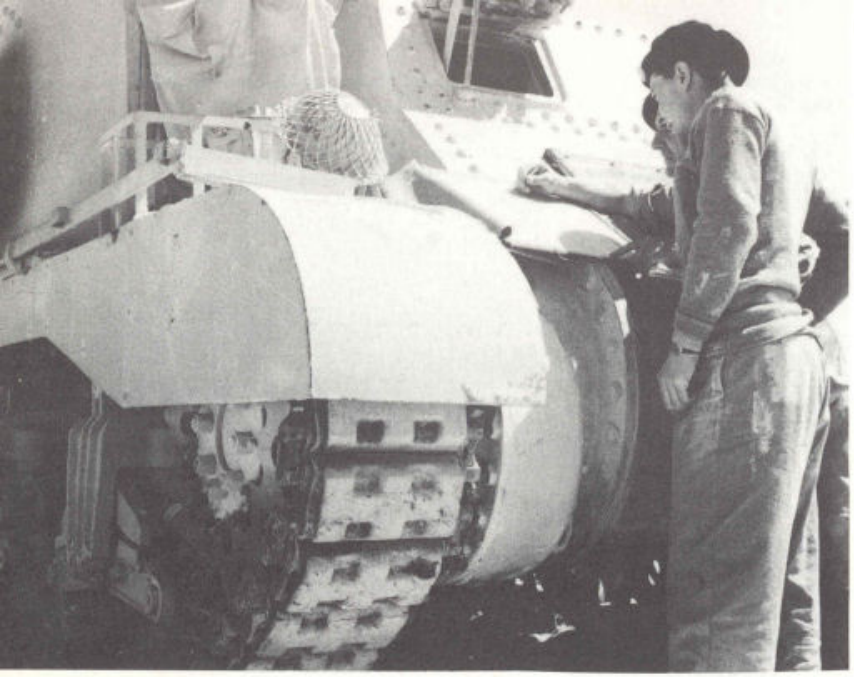
The U.S. Lend-Lease M3A3 Stuart light tank arrived in North Africa in July 1941. The Stuart, or as it was known to the British, the "Honey," was powered by a Pratt and Whitney radial aero-engine. While this allowed an unheard of speed of 36 MPH, it also brought problems as the aviation fuel tended to flare up easily if hit.

From the beginning of the Desert Campaigns, the British had suffered from not having a dual purpose tank weapon, capable of firing both armor-piercing and high-explosive rounds. The U.S. M3 series "Grant" tank went far to solving this problem. The turret mounted 37mm gun from the "Honey" was questionable in as much as the vehicle commander had to be both loader and gunner for this weapon.



British M3 'GRANT' Medium Tank

The "Grant" proved quite a surprise to the Germans in the Gazala battle on May 27, 1942. Here the 4th Armored Brigade inflicted severe losses on the over-confident Panzer III's and IV's, who closed the range before they realized that they were faced with larger caliber weapons than 2 Pdr's or 37mm's.

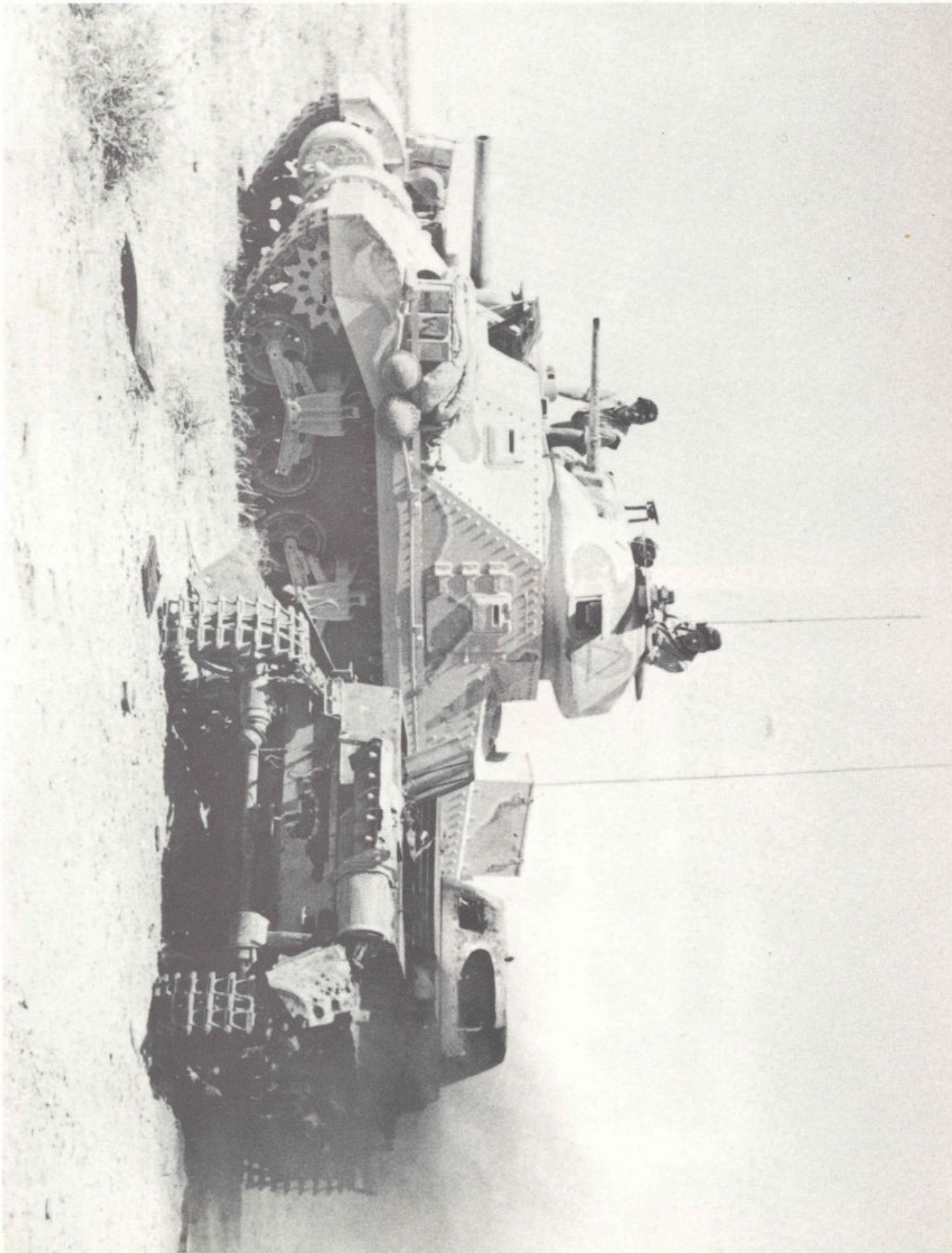


The Grant was protected by 2 inches of armor plate in front and 1-1/2 inches on sides, top and rear. Total weight, 30 tons, could be driven at speeds up to 26 MPH a distance of 240 miles. By May 27, 1942, 167 Grant I's formed the bulk of vehicles of 4th Armored Brigade, engaged during the Gazala battle. This number was increased to nearly 600 M3 series tanks in British service by the time of the Battle of El Alamein. The typical sand shields were a British addition and served to reduce the cloud of dust thrown up by tracked vehicles.

(Below left) Ammunition stowage on the "Grant" was composed of 46 rounds of 75mm, 178 rounds of 37mm and 9,200 rounds of .30 cal MG. All of the Grants had the suspension as viewed here, as did early "Shermans." This vertical volute system was refined later into a horizontal volute arrangement and installed on late model "Shermans."

The first "Shermans" of the M4A1 variant, arrived in North Africa in October 1942. Some three hundred "Shermans" were diverted to the British by President Roosevelt to replace losses they had incurred during the battle of Gazala. 270 of this number participated in the Battle of El Alamein, on October 24, 1942. For the first time the British were able to field a tank that was equal to the PzKpfw III and only slightly inferior to the PzKpfw IV Ausf F2, long barreled 75mm. The Battle of El Alamein was not so much one of tactics as it was supply. General Montgomery outnumbered Rommel, two to one in men and at least six to one or better in tanks. The "Shermans" gave a very good accounting of themselves from El Alamein through North Africa and into the European continent.

The "Grant" had two major flaws, both illustrated here. First, its high silhouette, compared to that of the burning Mark I, offered a good target for enemy AT gunners. Second, its main armament, a 75mm gun, had been mounted in a side sponson and restricted its area of fire. The 37mm gun turret had full 360° traverse. Despite these drawbacks, the "Grant" was welcomed by the British and used as their main battle tank until the arrival of the "Sherman."



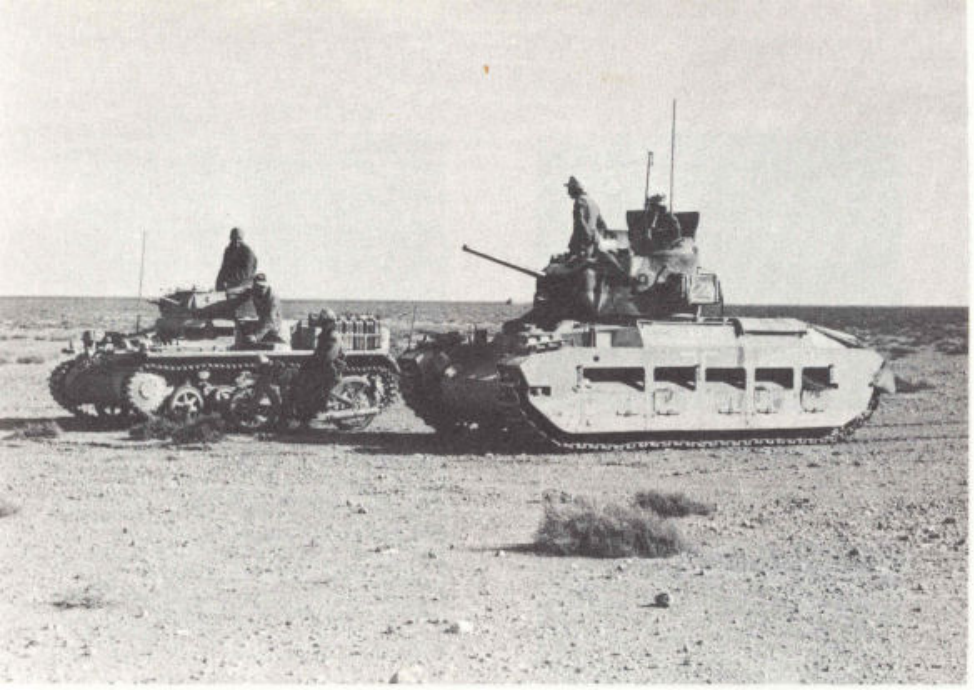
The result of Operation Crusader...

The result of **Operation Crusader** had forced Rommel to retire from Libya, conducting an orderly retreat all the way to El Agheila, which he reached in early January 1942. Although Rommel had made some mistakes during the battle, he did not have time to mull these over, other ideas were already taking shape.

On 21 January 1942 his tank strength had been brought up to 100 vehicles and he launched a counter-attack against the British which took not only the British by surprise but the German and Italian High Commands as well. Using captured British supplies, Rommel drove his attack forward and after two weeks fighting had the British in a defensive position at Gazala, west of Tobruk.

Here both sides stopped due to lack of supplies and prepared to rebuild their respective forces to continue the battle yet again. Churchill pressed for an attack, for only in North Africa were British forces in contact with the Germans. General Ritchie, who had replaced Cunningham as commander of the 8th Army during **Crusader,** strived to ready his force and launch the new attack, coded **Operation Buckshot.** On 26 May, however, the plans for **Buckshot** went into the barrel, Rommel had moved first.

The battle continued for several days after which time Rommel was forced to go to the defensive due to critical supply shortages, but did so right in the middle of the Gazala Line minefields. Rommel's bridgehead became known as the Cauldron. After some improvement in his supply situation, Rommel again moved to the offensive and succeeded in taking half of the Gazala Line. The ferocity of the tank battles can be judged by the fact that General Ritchie reported a tank strength of 330 on 11 June, on the 14th he had but 70. Nothing remained but to withdraw. Tobruk was cut off and fell after a one day assault on 21 June. A race for the Egyptian border began and ended 60 miles from Alexandria at El Alamein with both sides completely worn out.



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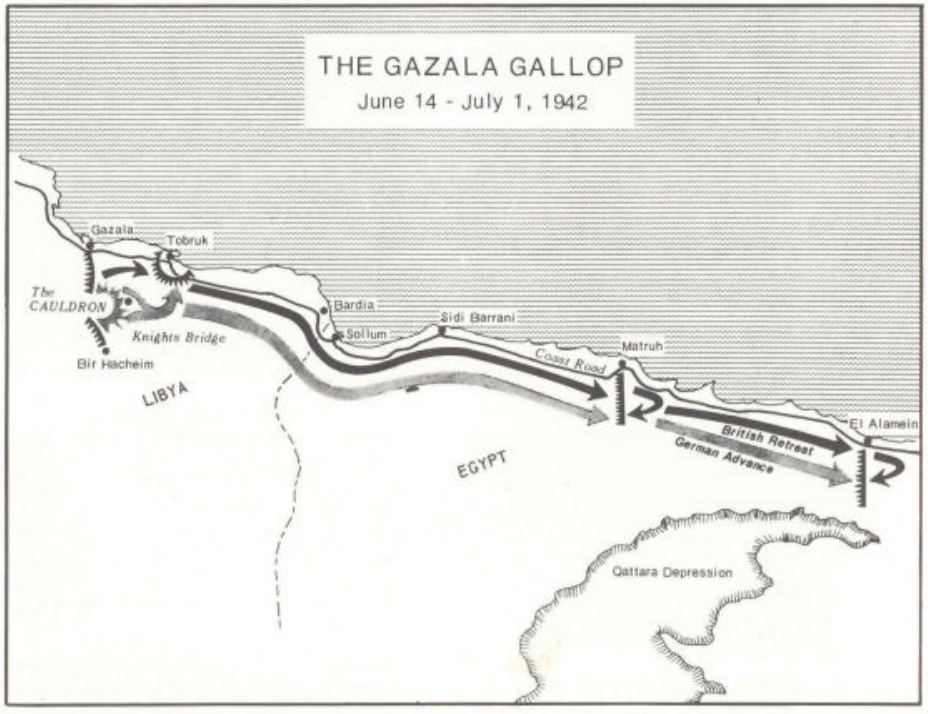
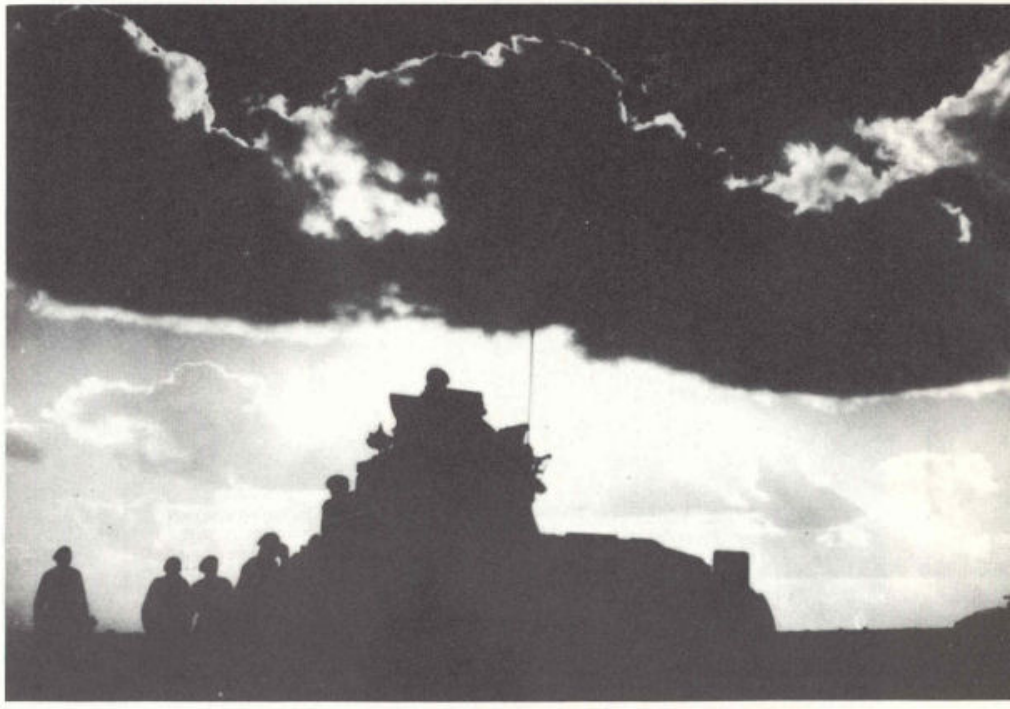

THE GAZALA GALLOP
June 14 - July 1, 1942
Gazala
Tobruk
The CAULDRON
Knights Bridge
Bir Hacheim
LIBYA
Bardia
Sollum
Sidi Barrani
Coast Road
Matruh
El Alamein
British Retreat
German Advance
EGYPT
Qattara Depression



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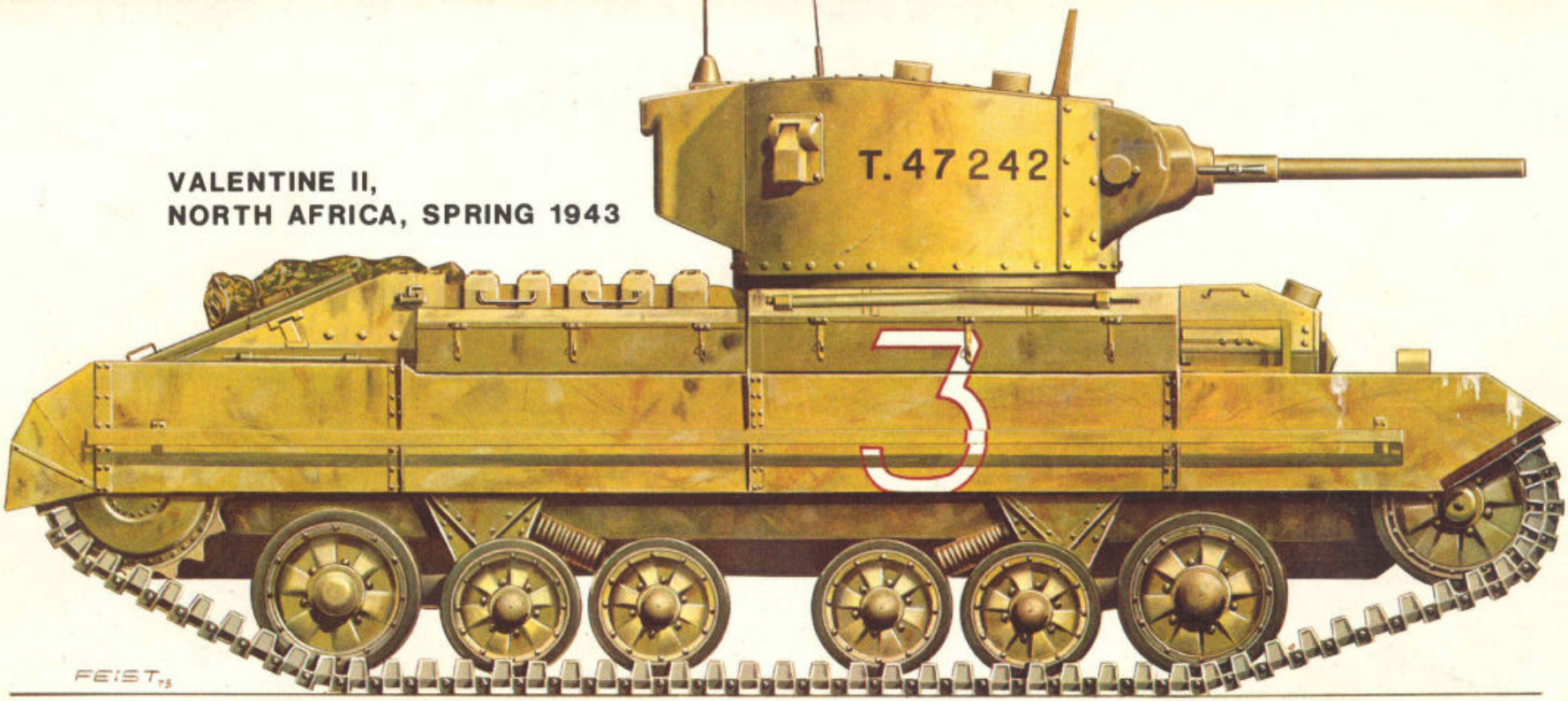
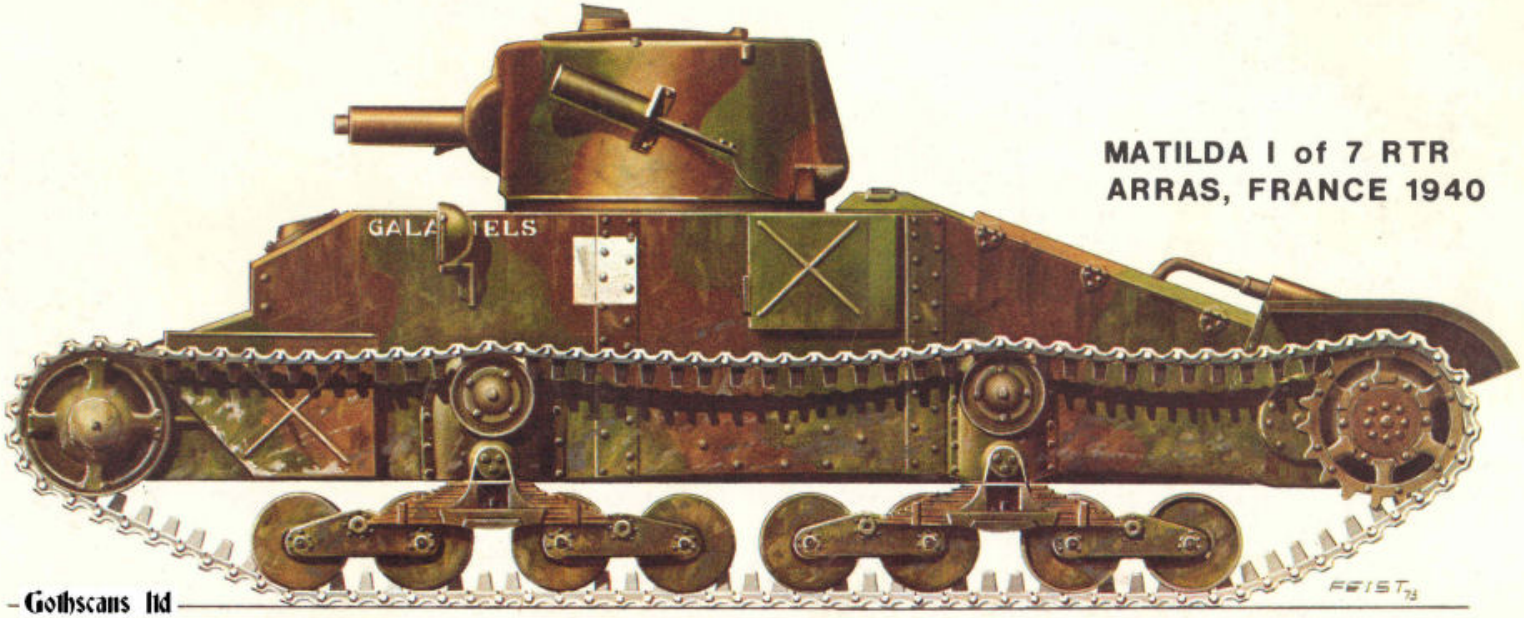


VALENTINE II,
NORTH AFRICA, SPRING 1943



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